



# South of the Sound Community Farm Land Trust

Priority Conservation Areas Study





The Priority Conservation Areas Study has been developed with a Geographic Information Systems-based model using the best available data from public agencies. Opinions or points of view expressed herein do not necessarily represent the official position of South of the Sound Community Farm Land Trust. This is a non-regulatory document and any action relative to land acquisition will be made between South of the Sound Community Farm Land Trust and willing land owners. Decision-makers using this document are encouraged to do their due diligence through follow-up research on the contents of this report.

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September 2017



A special thank you to Alana Carr for providing the photography found throughout, richly depicting scenes of South Sound agricultural life.

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# Executive Summary

This project culminates on the eve of South of the Sound Community Farm Land Trust's 20th year of incorporation. With the future in mind, of SSCFLT and of farmland conservation in the South Sound Region, the Priority Conservation Areas Study was generated to serve as a complementary resource for the following:

- identifying areas for targeted project pipeline outreach
- prioritizing acquisition opportunities
- explaining conservation decisions
- matching geographic areas of interest with funding opportunities
- assessing conservation strategies in a changing environment
- overall visioning, goal-setting, and decision-making

The project Study Area includes Grays Harbor County, Lewis County, Mason County, and Thurston County - totaling 294,215 parcels. Within the Study Area, there are approximately 3,900 existing farms. As SSCFLT works to preserve this landscape, the organization plans community outreach strategies, faces difficult choices about property selection, must justify conservation strategies and decisions, find ways to broaden the resource pool for organizational development, and navigate an unpredictable and changing environment due to climate change.

This Study will exist as a baseline for understanding the lay of the land today. From this point, the important values of economic justice, food security, and the celebration of local culture can be incorporated into visioning, goal-setting, and decision-making about the best course for

preserving farmland in the South Sound Region. The methodology used for identifying priority conservation areas includes scoring parcels using weighted conservation criteria, and is explained in detail in Chapter 2, "Study Approach."



The Study includes background research on conservation criteria in three categories: Agricultural Values, Environmental Values, and Community Values and Priorities. Within these three categories, specific elements include agricultural soils, parcel size, development threat, critical habitat, natural heritage, salmon-bearing streams, connectivity, historical significance, landscape significance, and agricultural productivity. The distribution of these attributes within the region is discussed and presented visually with maps in Chapter 3, "Conservation Criteria & Study Area Characteristics."

Areas where conservation attributes are most densely concentrated are located using Geographic Information Systems (GIS), with results described and displayed in maps and tables in Chapter 4, "Priority Conservation Areas Results."

To add context, an additional spatial analysis was performed using the same project methodology, with modified conservation criteria that focuses strictly on the agricultural attributes of parcels within the Study Area. For this analysis, farmland conservation criteria elements include agricultural soils, parcel size, agricultural productivity, and consideration for the presence of a Heritage Barn.

Combining the results of both spatial analyses, conservation criteria and farmland-only criteria, shows that, looking forward, agriculturally-dominant areas in Grays Harbor and Lewis County may hold significant conservation value. However, collectively, nearly 70 percent of the very highest-ranking

parcels that help establish Priority Conservation Areas are found in Thurston County. These results support a continued focus of conservation efforts in Thurston County.

# 1. Background



Western Washington farmland is an important economic, cultural, and environmental resource. Regions all over the United States, including the Puget Sound Region, are experiencing the loss of productive farmland to urban development. Thurston County is one example of an area seeing a rapid loss of farmland concurrent with population growth. Washington State University Extension (2017) estimates that, since the mid-1950's, Thurston County has lost over 75 percent of its working agricultural lands. Steady growth since the 1950's has increased the population by over 200,000 residents, and most recent census data shows that between 2000 and 2010, the County grew by more than 20 percent (U.S. Census). Over the fifteen-year timespan between 2000 and 2015, Thurston County permanently lost 6,500 acres of farmland to development (Thurston Regional Planning Council, 2017).

Farmland loss was identified as a topic of public concern during Thurston Regional Planning Council's (TRPC's) comprehensive planning initiative that began in 2011, *Sustainable Thurston*. In 2016, TRPC set priorities for achieving the target of "No Net Loss" of farmland in the County (Thurston Regional Planning Council, 2017). Exploring tools and strategies for farmland conservation, programs and policies for No Net Loss include supporting farmland acquisition by a land trust or conservation agency through fee simple purchase or agricultural conservation easement (Thurston Regional Planning Council, 2017).

South of the Sound Community Farm Land Trust (SSCFLT) was formed to meet farmland conservation needs in Thurston County almost two decades ago. Based in Olympia, Washington, SSCFLT is a non-profit organization with the mission of conserving farmland in the South Sound Region of Washington State.

Today the organization is made up of a working Board of Directors and a small staff, with an inventory of two farm properties totaling over 100 acres, with additional acquisitions currently underway. SSCFLT has adopted the following mission statement to describe the group's work: "Promoting vibrant local food and farming systems through community supported farmland preservation strategies, educational outreach, and partnerships that increase opportunities for farms and farmers to flourish," (South of the Sound Community Farm Land Trust, 2017).

The farmland trust pursues conservation through the fee simple purchase of farms and the purchase of property development rights with an agricultural conservation easement (ACE), and is poised to directly contribute to meeting the farmland No Net Loss target set by the Thurston Regional Planning Council.

SSCFLT has recently realized the goal of permanently saving farmland in Thurston County through property acquisition, due in large part to funding opportunities provided by the County's Conservation Futures grant program. In 1995, the Washington State Legislature enacted RCW 84.23.240 to provide county governments the ability to protect open space and natural resources through adoption of a Conservation Futures program. The program has since been established in 13 counties in Washington.

Conservation Futures is a property tax levied to acquire land and development rights to protect, restore, and maintain open space, timberlands, wetlands, habitat areas, culturally significant sites, and

agricultural lands within the county where the tax is collected (Thurston County, 2017). By awarding grant funding of over \$1 million dollars directly to SSCFLT, Conservation Futures in Thurston County has played a fundamental role in making possible the organization's farm acquisitions up to this point.

To date, SSCFLT has focused acquisition efforts in Thurston County due to the ongoing patterns of local farmland conversion to urban development. However, the farmland trust maintains a commitment to addressing the risk of farmland loss in the greater South Sound Region. Broadly, SSCFLT's exploratory area of interest for the purposes of this Study encompasses four counties: Thurston, Grays Harbor, Lewis, and Mason, shown in the map on the following page, *Map 1.1 Study Geographic Area*. Together these counties total 6,485 square miles and collectively produce agricultural goods with a market value of more than \$325 million, highlighted below in *Table 1.1 Study Area Agricultural Census Data* (United State Department of Agriculture, 2012).

Table 1.1 Study Area Agricultural Census Data (2012)

County	Size (Square Miles)	Population <sup>1</sup>	Number of Farms	Market Value of Crops and Livestock	Agricultural Specialization
Grays Harbor	2,224	71,122	557	\$31 million	- Nursery/Greenhouse - Aquaculture - Milk
Lewis	2,436	75,882	1,647	\$132 million	- Fryers - Milk - Christmas Trees
Mason	1,051	61,023	377	\$41 million	- Aquaculture - Cattle - Christmas Trees
Thurston	774	269,536	1,336	\$122 million	- Nursery/Greenhouse - Poultry - Milk

<sup>1</sup> U.S. Census Population Estimate July 1, 2015



Map I.1 Study Geographic Area: Grays Harbor County, Lewis County, Mason County, and Thurston County

Source: ArcGIS, 2017

## 2. Study Approach

The Priority Conservation Areas Study project aims to help guide SSCFLT's future planning, decision-making, and outreach strategies in the South Sound Region. The spatial analysis contained here provides a rational approach for identifying priority farmland conservation areas using Geographic Information Systems (GIS) software to evaluate land in the Study Area based on a range of conservation criteria.

To begin, conservation criteria data is overlaid on a map of the Study Area: Grays Harbor, Lewis, Mason, and Thurston Counties. A point scale is assigned for each conservation attribute, with the valuable agricultural attributes weighted most heavily. Individual parcels are scored according to the sum of their conservation attributes, with a total of 294,215 parcels included in the four-county Study Area. Once scores are calculated, the GIS software produces maps displaying parcels ranked by score - higher scores will be indicative of those parcels with higher conservation value. The series of maps displaying parcel attributes and, thus, score-values for individual conservation elements, are found in the next chapter "Conservation Criteria & Study Area Characteristics."

Regarding parcel scoring, in this analysis, a parcel receives a score whether the conservation element occurs in whole or in part. For example, if a portion of the property contains prime soils, the whole parcel will be weighted for the occurrence of prime soils. In the instance that a parcel contains more than one conservation element, the higher score is counted.



Table 2.1 Agricultural Values Scoring

Conservation Criteria	Score
<b>Agricultural Soils</b>	<b>0 - 6</b>
Prime Farmland	6
Farmland of Statewide Importance	4
Prime Farmland if drained	4
Prime Farmland if drained and either protected from flooding or not frequently flooded during the growing season	4
Prime Farmland if irrigated	4
Prime Farmland if irrigated and drained	4
Prime Farmland if irrigated and either protected from flooding or not frequently flooded during the growing season	4
Prime Farmland if protected from flooding or not frequently flooded during the growing season	4
Not Prime Farmland	0
<b>Parcel Size</b>	<b>0 - 3</b>
10 to 49.9 Acres	3
Greater than 50 Acres	2
1 to 9.9 Acres	1
Less than 1 Acre	0
<b>Development Threat (Proximity to Urban Growth Area)</b>	<b>0 - 4</b>
Within Urban Growth Area (UGA), Adjacent to Within 0.1 Miles of UGA	4
0.1 to 2.9 Miles	3
3 to 6.9 Miles	2
Greater than 7 Miles	1
Other	0
<b>Agricultural Values Score Potential</b>	<b>0 - 13</b>

Table 2.2 Environmental Values Scoring

Conservation Criteria	Score
<b>Critical Habitat</b>	<b>0 - 8</b>
Oregon Spotted Frog	2
Streaked Horned Lark	2
Yellow-billed Cuckoo	2
Pocket Gopher	2
<b>Salmon-bearing Streams</b>	<b>0 - 2</b>
Bull Trout/Dolly Vardon Known Streams	2
Other Salmon-bearing Streams	1
<b>Natural Heritage</b>	<b>0 - 4</b>
Native Grasslands and Oak Woodlands	2
Rare Plants and High Quality Ecosystems	2
<b>Connectivity</b>	<b>0 - 1</b>
Adjacent to Tribal Lands or Public Lands	1
<b>Environmental Values Score Potential</b>	<b>0 - 15</b>

Table 2.3 Community Values and Priorities Scoring

Conservation Criteria	Score
<b>Historical Significance</b>	<b>0 - 2</b>
Heritage Barn	2
<b>Landscape Significance</b>	<b>0 - 2</b>
Adjacent to Scenic Highway	1
Adjacent to Public Trail	1
<b>Agricultural Productivity and Local Food Production</b>	<b>0 - 4</b>
Market Crops	4
Other Food Crops (Berry, Cereal Grain, Orchard, & Vegetable Crops)	3
Hay/Silage	2
Other (Commercial Tree, Flower Bulb, Green Manure, "Herb," Nursery, Seed, Pasture, Turfgrass, Vineyard, & Other)	1
<b>Community Values and Priorities Score Potential</b>	<b>0 - 8</b>

In alignment with the conservation literature, South of the Sound Community Farm Land Trust identifies three (3) primary categories for evaluating the conservation value of a property, each with specific conservation elements. The criteria included here are based on available data, and are not exhaustive; however, they do provide a solid foundation for evaluation of priority conservation areas in the South Sound Region. These are listed below, by category:

#### Agricultural Values

- Soil Type
- Parcel Size
- Development Threat (Proximity to Urban Growth Areas)

#### Environmental Values

- Critical Habitat
- Salmon-bearing Streams
- Natural Heritage (Grasslands and Oak Woodlands & Rare Plants and High Quality Ecosystems)
- Connectivity

#### Community Values and Priorities

- Historical Significance (Heritage Barns)
- Landscape Significance (Adjacency to Scenic Highway & Adjacency to Public Trail)
- Agricultural Productivity and Local Food Production

Scoring and weighting within the three categories, Agricultural Values, Conservation Values, and Community Values and Priorities, is outlined in the tables at left: *Table 2.1 Agricultural Values Scoring*, *Table 2.2 Environmental Values Scoring*, and *Table 2.3 Community Values and Priorities Scoring*. For the purposes of the Study, efforts were taken to best align scoring with the conservation literature and the mission, values, and priorities of SSCFLT.

# 3. Conservation Criteria & Study Area Characteristics

The following chapter demonstrates the distribution of conservation criteria across the Study Area.

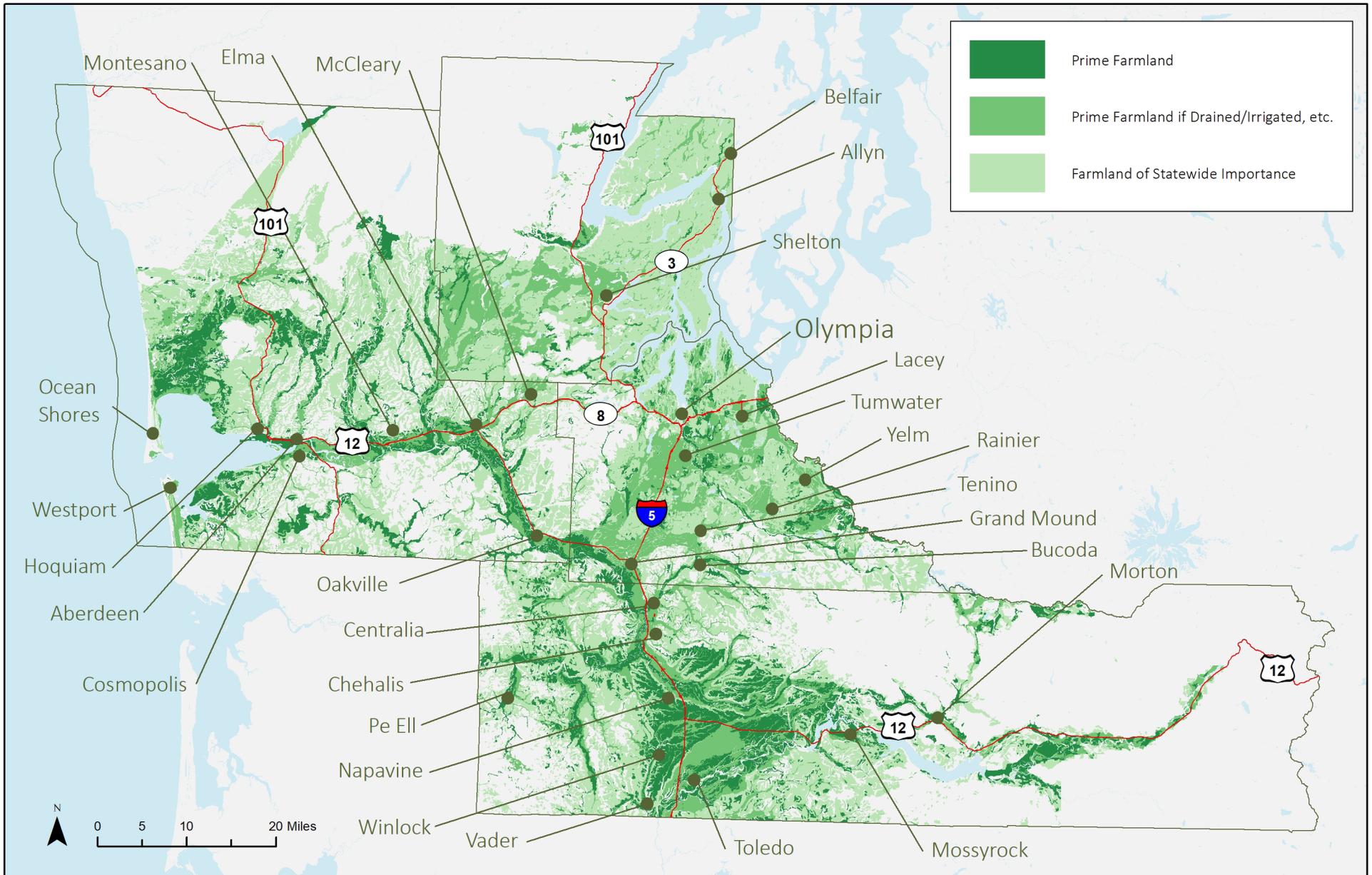
In this section, each conservation attribute is explained in terms of its relevance to farmland conservation in the region. The maps included here represent the individual parts that go into the aggregate score applied to parcels to develop an overall conservation value.

Agricultural Values characteristics are represented in *Map 3.1 Agricultural Soils*, *Map 3.2 Parcel Size*, and *Map 3.3 Proximity to Urban Growth Area*.

Environmental Values characteristics are represented in *Map 3.4 Critical Habitat* (and in greater detail in *Maps 3.5 - 3.8*), *Map 3.9 Salmon-bearing Streams*, *Map 3.10 Native Grasslands and Oak Woodlands & Rare Plants and High Quality Ecosystems*, and *Map 3.11 Tribal and Public Lands*.

Community Values and Priorities characteristics across the Study Area are displayed in *Map 3.12 Heritage Barns*, *Map 3.13 Scenic Highways and Public Trails*, and *Map 3.14 Agricultural Productivity* (and in greater detail in *Maps 3.15 - 3.18*).

# Agricultural Soils



Map 3.1 Agricultural Soils

Source: U.S. Department of Agriculture Natural Resources Conservation Service and Esri Landscape Team, 2015

# Agricultural Soils

Soil types found in the Study Area are classified into one of nine (9) groups, based on agricultural viability. The classifications include:

Prime Farmland

Prime Farmland, if...

- Drained
- Drained and either protected from flooding or not frequently flooded during the growing season
- Irrigated
- Irrigated and drained
- Irrigated and either protected from flooding or not frequently flooded during the growing season
- Protected from flooding or not frequently flooded during the growing season

Farmland of Statewide Importance

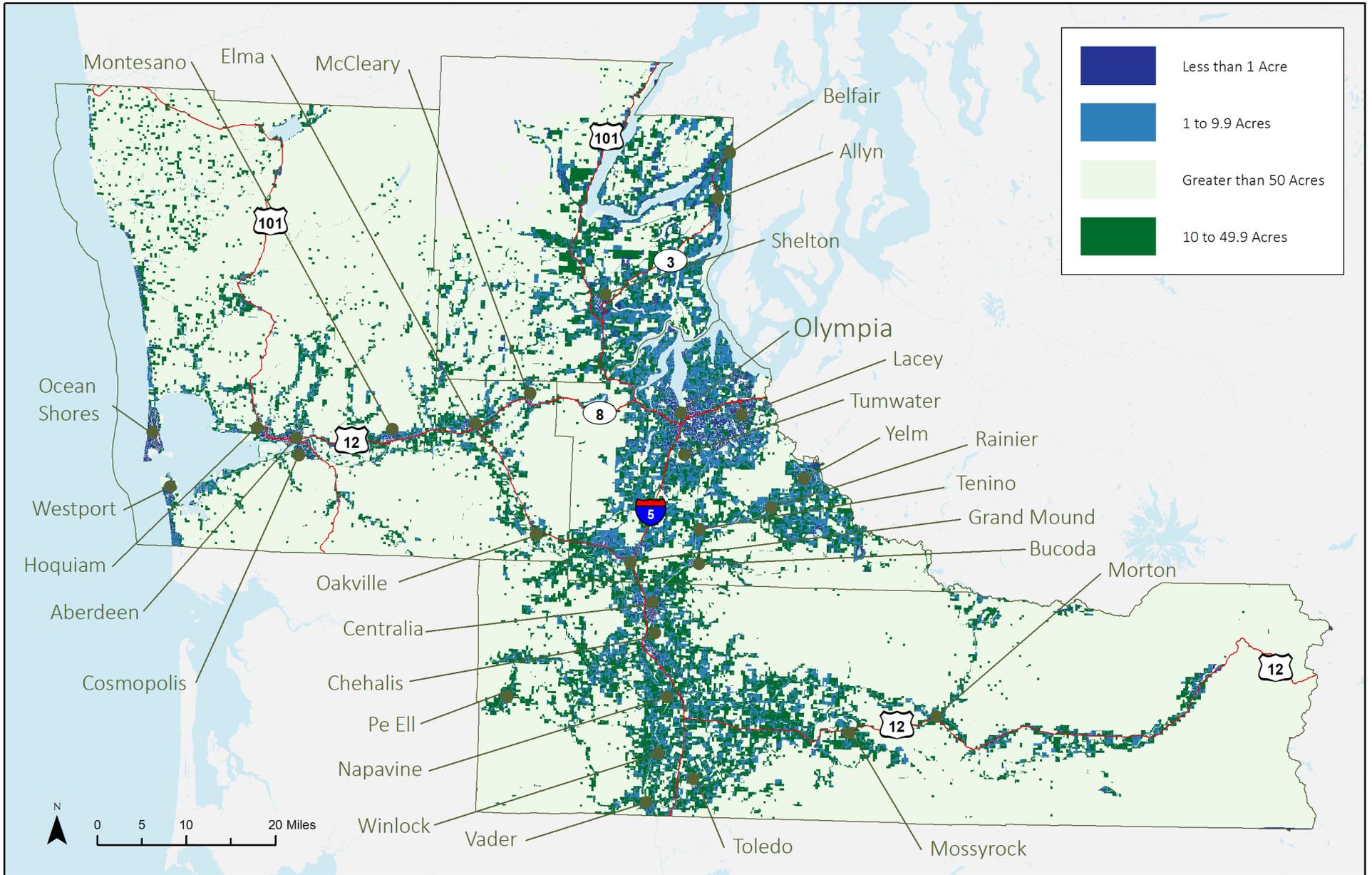
Not Prime Farmland or Agricultural Soils of Significance

In total, Prime Farmland occurs on 24 percent of Study Area parcels (69,608 parcels). Another 65 percent of parcels (191,029 parcels) contain either Prime Farmland if Drained/Irrigated, etc. or Farmland of Statewide Importance.

Prime Farmland is found throughout the Study Area, but predominantly in Grays Harbor and Lewis Counties. The distribution of Prime Farmland is significant in relation to two major waterways, Chehalis River and Cowlitz River. The distribution of agricultural soils within the Study Area is shown in *Map 3.1 Agricultural Soils*, to the left.



# Parcel Size



Map 3.2 Parcel Size

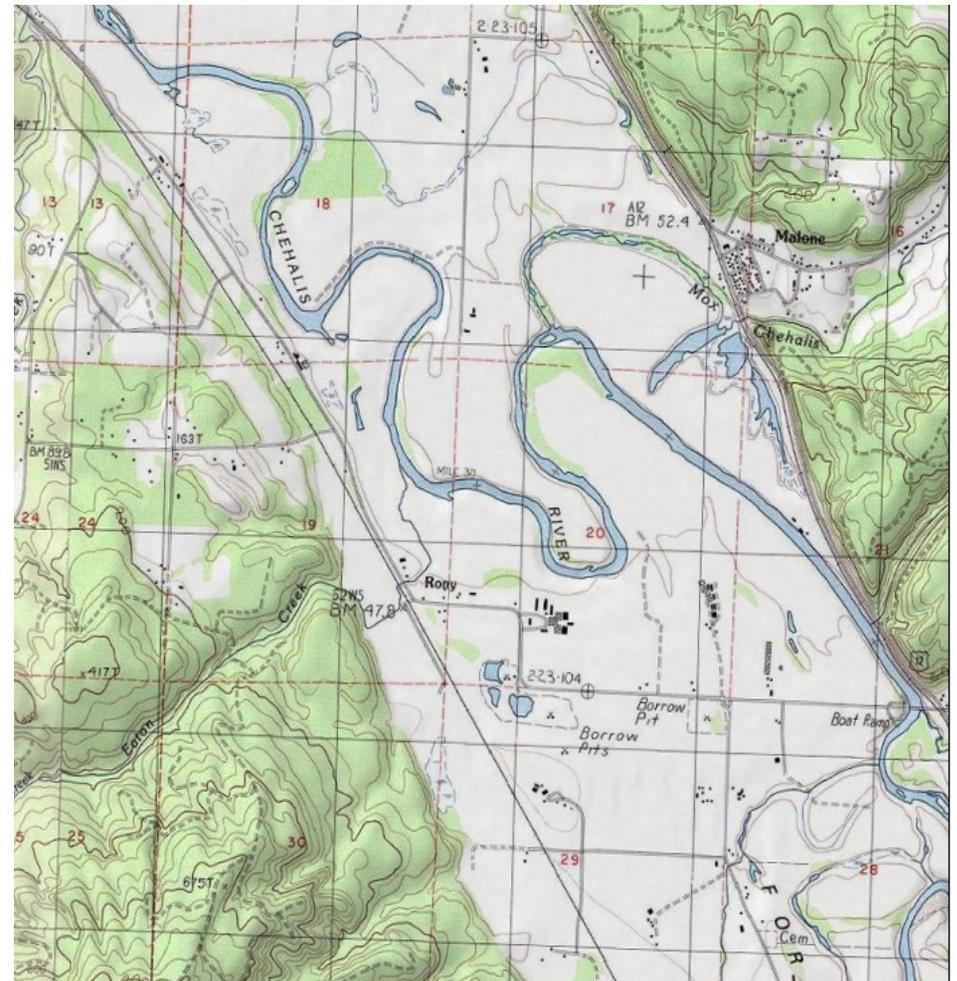
Source: Washington State Parcel Database, 2016

# Parcel Size

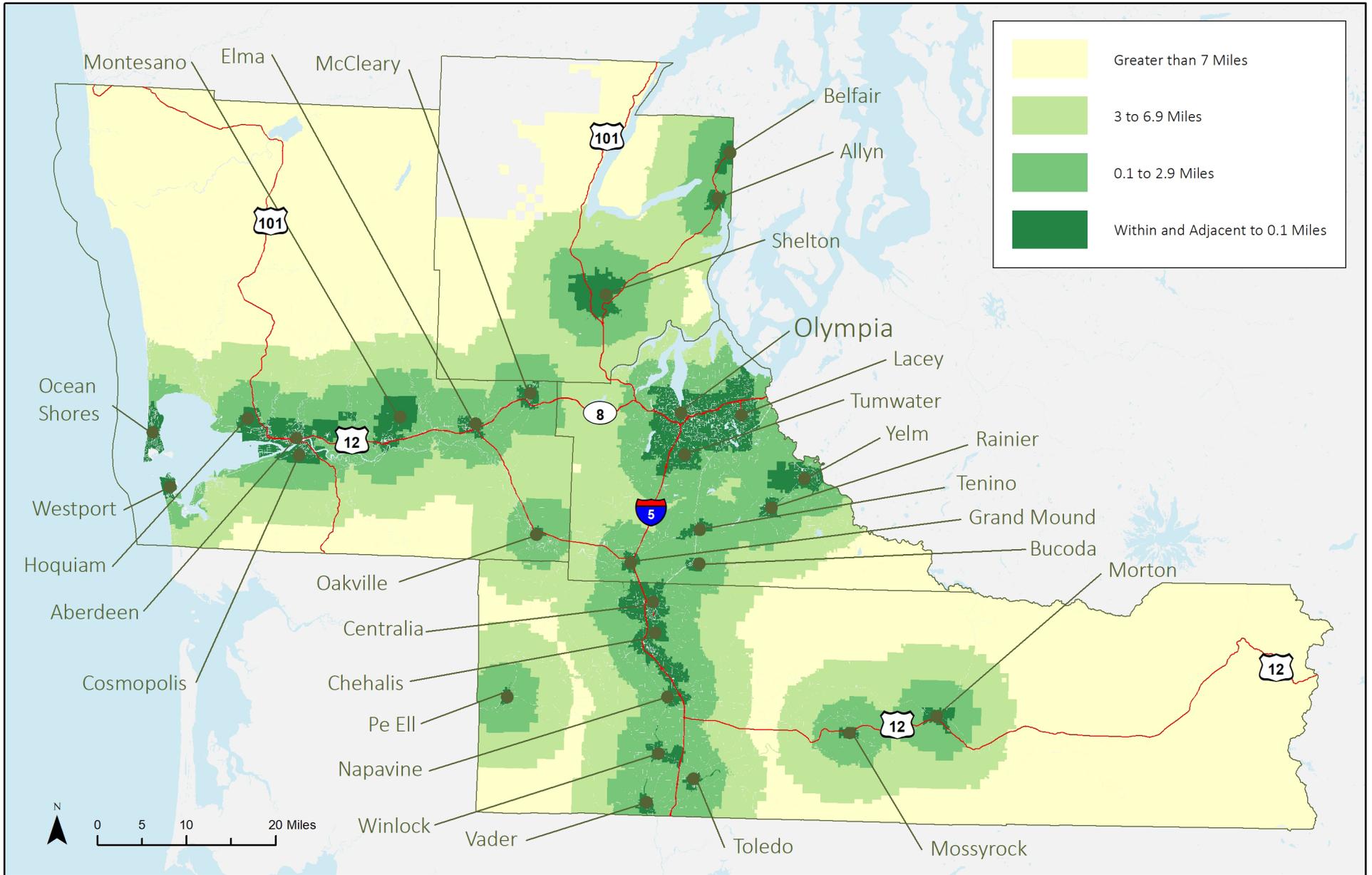
The conservation literature points to the benefits of large parcel sizes in maintaining a working landscape, as well as landscape connectivity. While greater size can increase the agricultural viability of individual parcels, at the same time, many mid-sized farms in the South Sound Region have thrived, and food and market crops are grown on nearly twice as many parcels in the range of 10 to 49.9 acres, over the range of 50 acres and above. For this reason, parcels in the mid-sized range of 10 to 49.9 acres were given priority through scoring, followed by parcels 50 acres and greater. Smaller-sized parcels were given lower scores.

Across the Study Area, 61 percent of parcels are at a size of less than one (1) acre. A total of seven (7) percent of parcels (approximately 20,000 parcels) are found within the highest-scoring, 10- to 49.9-acre range. The majority of parcels in this range are found in Lewis County (7,656 parcels).

The map to the left, *Map 3.2 Parcel Size*, shows the distribution of parcels by size in acreage.



# Proximity to Urban Growth Areas



Map 3.3 Proximity to Urban Growth Areas

Source: Washington State Department of Ecology, 2016

# Development Threat

Washington State land use laws under the Growth Management Act encourage planned urban development within identified urban growth areas (UGAs), to be followed by successive growth outward as needed (RCW 36.70A.110). While urban growth areas may include greenbelts and open space, the threat of farmland loss is considered highest within and adjacent to urban growth areas for the purposes of this Study.

The following Urban Growth Areas are found within the Study Area:

## Grays Harbor County

- Aberdeen
- Cosmopolis
- Elma
- Hoquiam
- McCleary
- Montesano
- Oakville
- Ocean Shores
- Westport

## Lewis County

- Centralia
- Chehalis
- Morton
- Mossyrock
- Napavine
- Pe Ell

- Toledo
- Vader
- Winlock

## Mason County

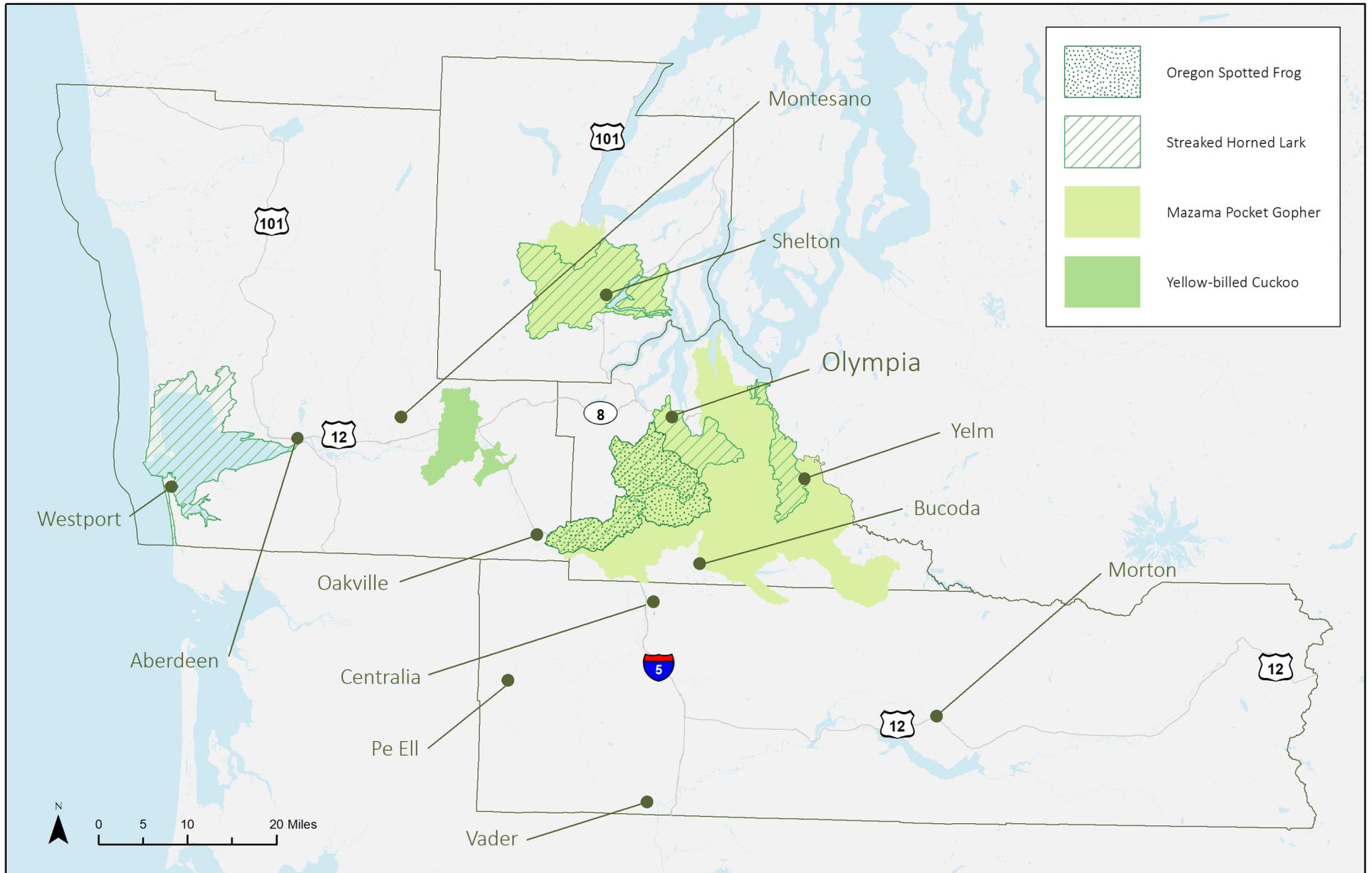
- Allyn (unincorporated)
- Belfair (unincorporated)
- Shelton

## Thurston County

- Bucoda
- Grand Mound (unincorporated)
- Lacey
- Olympia
- Rainier
- Tenino
- Tumwater
- Yelm

Approximately 45 percent of parcels within the Study Area are found within or adjacent to (within 0.1 miles) an urban growth area, and another 24 percent of parcels are located within 2.9 miles of an urban growth area. The remaining 21 percent of parcels within the Study Area are located beyond these urban centers by a distance of 3 miles or more. Parcel ranges, in distance from UGAs, are depicted in the map opposite, *Map 3.3 Proximity to Urban Growth Areas*.

# Critical Habitat



Map 3.4 Critical Habitat

Source: Washington State Department of Fish and Wildlife, 2015

# Critical Habitat

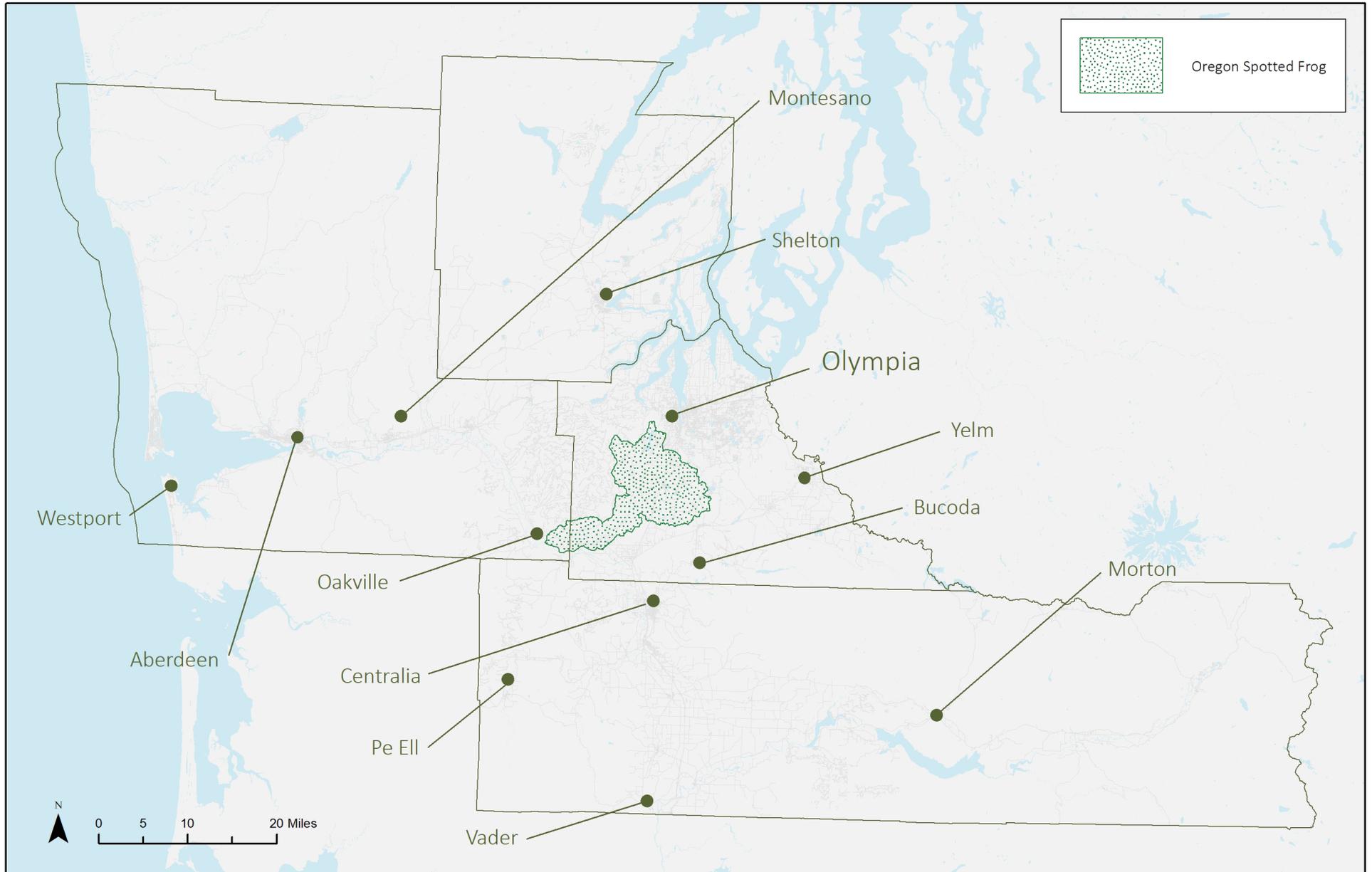
Farmland can provide critical habitat to species of concern, increasing the conservation value of a property. Working agricultural lands are compatible with the habitat needs of four (4) of the threatened or endangered species found in the Study Area. The species include one (1) amphibian, two (2) birds, and one (1) mammal, as follows:

- Oregon Spotted Frog (*Rana pretiosa*)
- Streaked Horned Lark (*Eremophila alpestris strigata*)
- Yellow-billed Cuckoo (*Coccyzus americanus*)
- Mazama Pocket Gopher (*Thomomys mazama*)

The map to the left, *Map 3.4 Critical Habitat*, shows the distribution of observed critical habitat across the Study Area for the above-listed species. Areas of overlapping habitat sites for these species are found in Grays Harbor, Mason, and Thurston Counties. Where an individual parcel may provide habitat to more than one listed species, a cumulative score for all potential habitat is given to the parcel, with the consideration that a static weight for the presence of critical habitat would fail to represent the full conservation value of the land. The following pages provide greater detail on the individual species' habitat types and distribution over the Study Area.

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# Oregon Spotted Frog Observed Habitat



Map 3.5 Oregon Spotted Frog Observed Habitat

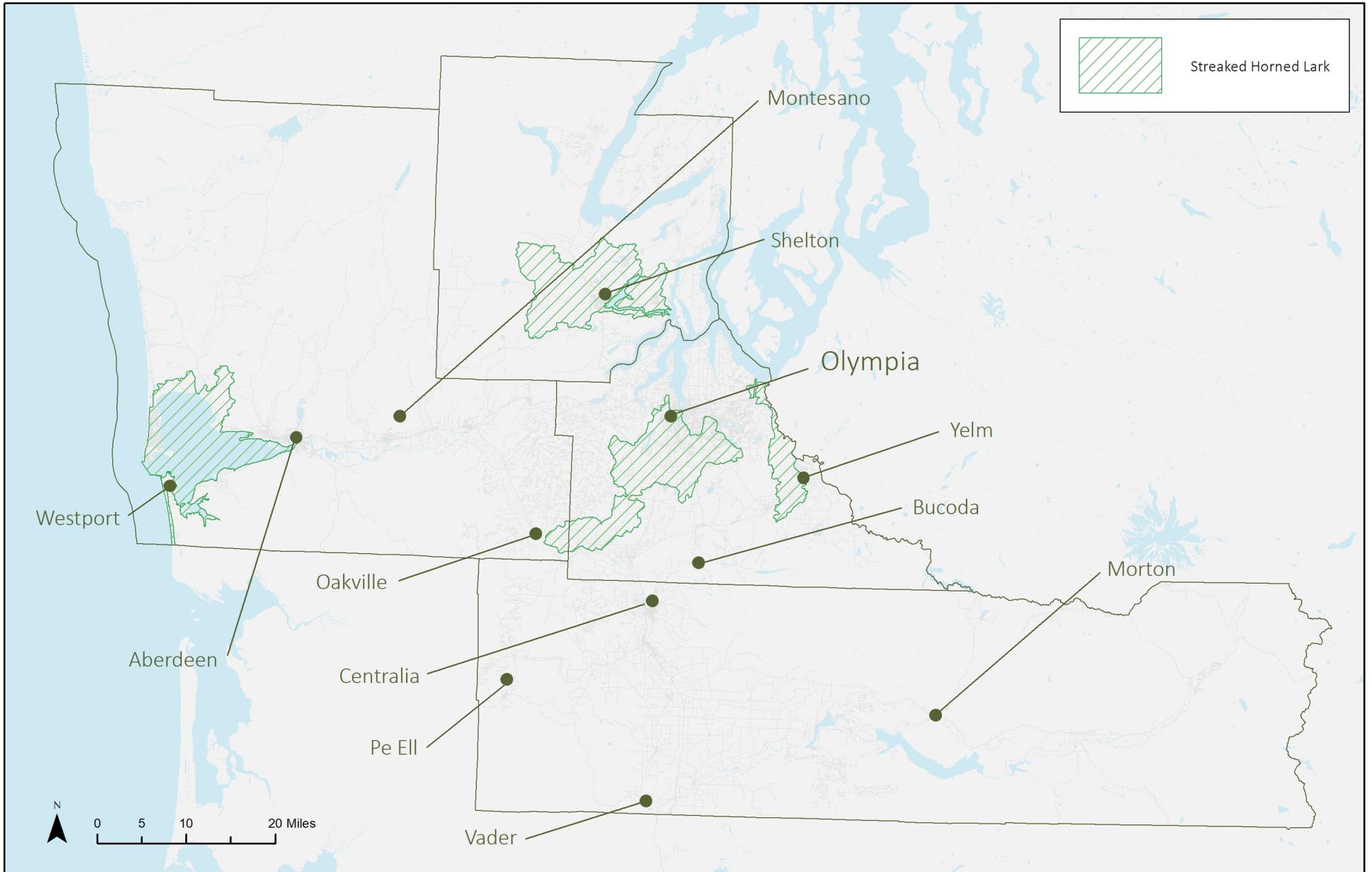
Source: Washington State Department of Fish and Wildlife, 2015

# Oregon Spotted Frog

Observed habitat for the Oregon Spotted Frog (*Rana pretiosa*), as shown in the map to the left, *Map 3.5 Oregon Spotted Frog Observed Habitat*, is primarily located in central and western Thurston County, spilling over into the southeastern corner of Grays Harbor County. Habitat is largely aquatic and associated with wetlands and marshes. The frog prefers low vegetation and wet shallows, which makes seasonally inundated hay fields and pasture suitable habitat. Habitat includes approximately 10,500 parcels within the Study Area, particularly in the vicinity of the upper Black River drainage system. Federal listing status is Threatened. (Hallock, 2013)



# Streaked Horned Lark Observed Habitat

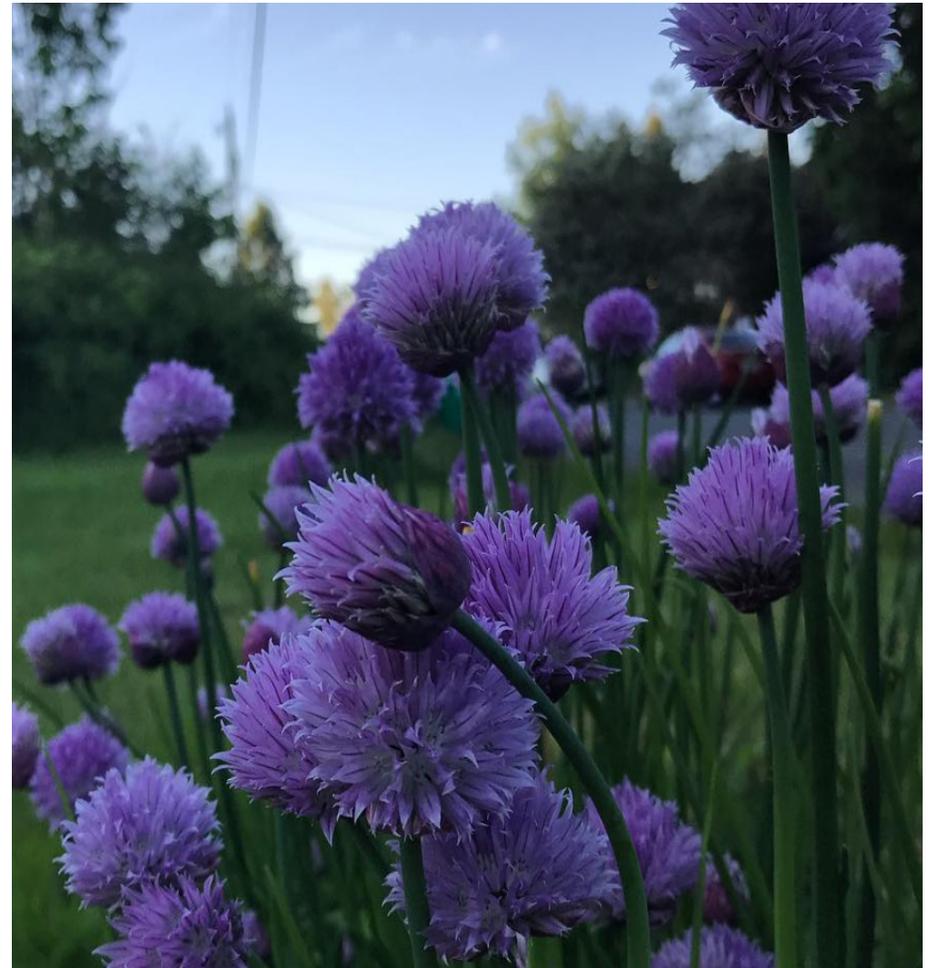


Map 3.6 Streaked Horned Lark Observed Habitat

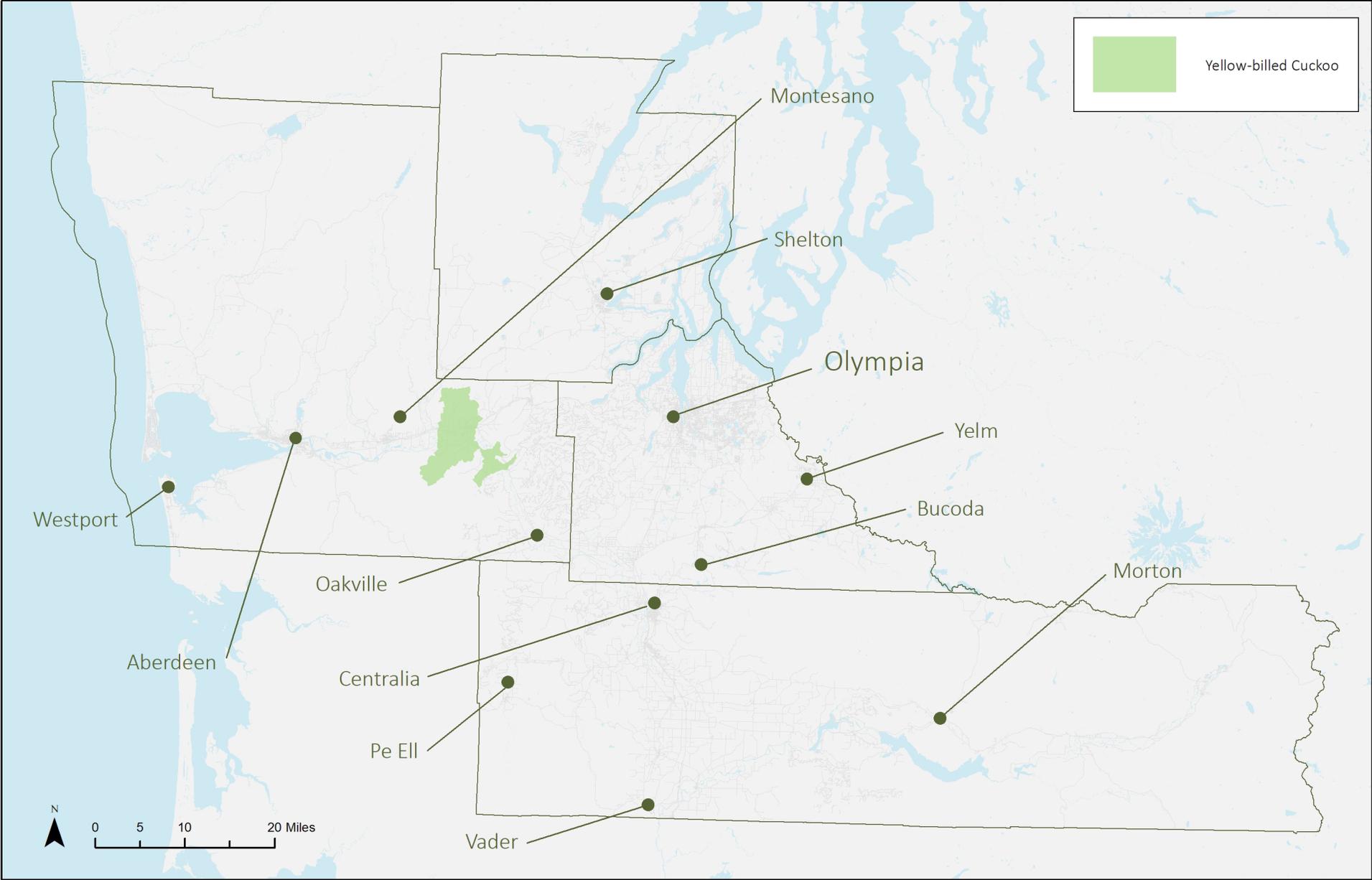
Source: Washington State Department of Fish and Wildlife, 2015

# Streaked Horned Lark

The Streaked Horned Lark (*Eremophila alpestris strigata*) is a partially migratory bird species, with habitat that includes sparsely vegetated grasslands and agricultural fields, in addition to beaches. As depicted in *Map 3.6 Streaked Horned Lark Observed Habitat*, the bird may inhabit parts of Grays Harbor, Mason, and Thurston Counties. The Washington State Department of Fish and Wildlife estimates that fewer than 150 breeding pairs are found in Washington. Federal listing for the species is Threatened; Washington State listing for the species is Endangered. (Stinson, 2016)



# Yellow-billed Cuckoo Observed Habitat



Map 3.7 Yellow-billed Cuckoo Observed Habitat

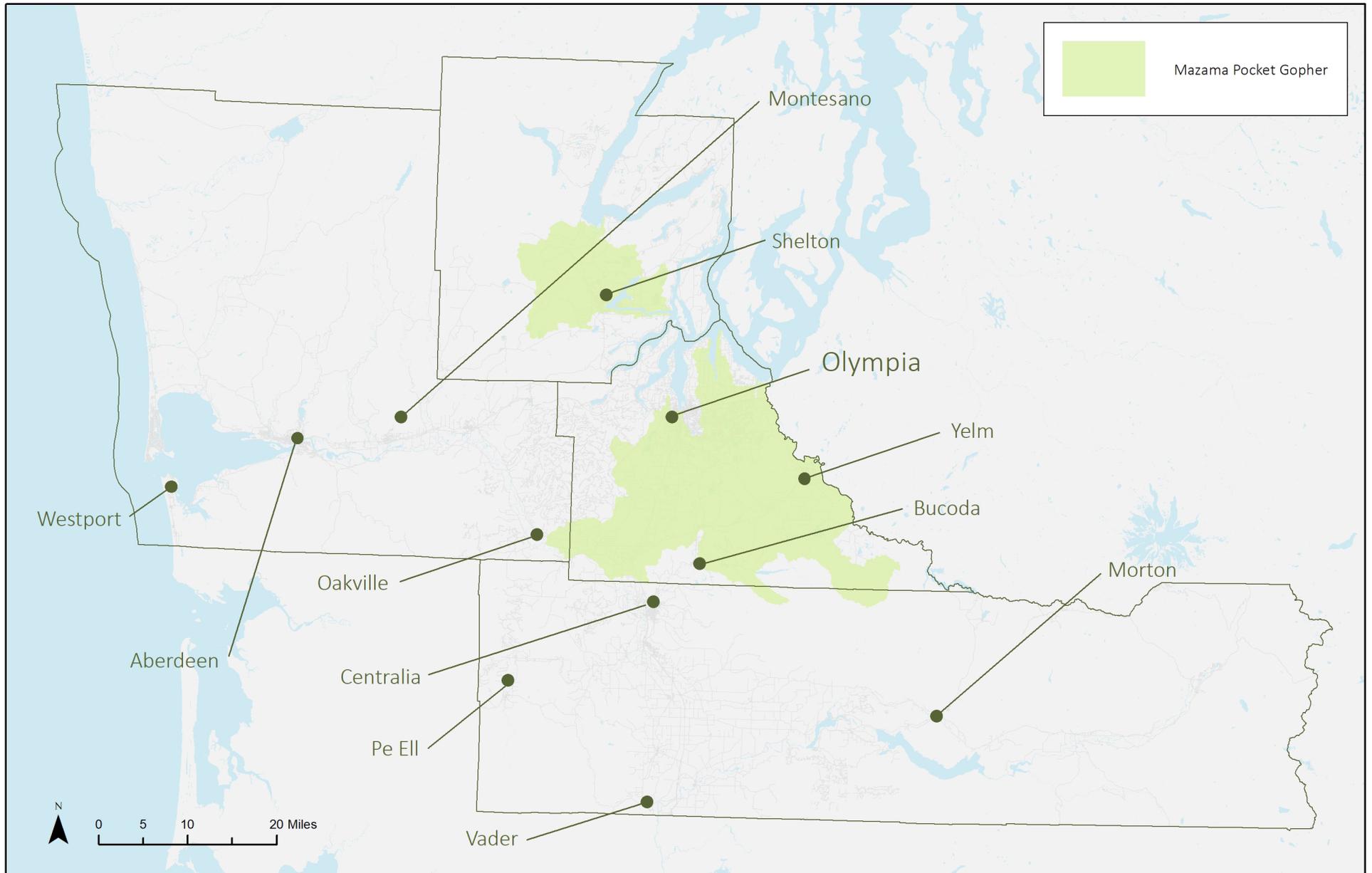
Source: Washington State Department of Fish and Wildlife, 2015

# Yellow-billed Cuckoo

Yellow-billed Cuckoo (*Coccyzus americanus*) habitat within the Study Area is found in a small portion of inland Grays Harbor County, near the Chehalis and Satsop Rivers, as shown in *Map 3.7 Yellow-billed Cuckoo Observed Habitat*, opposite. The birds inhabit deciduous, brushy riparian areas while nesting over the summer in the Study Area. Of all listed species habitat found in the Study Area, the cuckoo's range occurs on the fewest number of parcels, at just under 3,000 parcels. According to the Washington State Department of Fish and Wildlife, there are between 680 and 1,025 breeding pairs of the bird in existence, and the Department's *2017 Draft Status Report for the Yellow-billed Cuckoo in Washington* recommends Endangered status for the bird species. Federal listing status is Threatened. (Wiles & Kalasz, 2017)



# Mazama Pocket Gopher Observed Habitat



Map 3.8 Mazama Pocket Gopher Observed Habitat

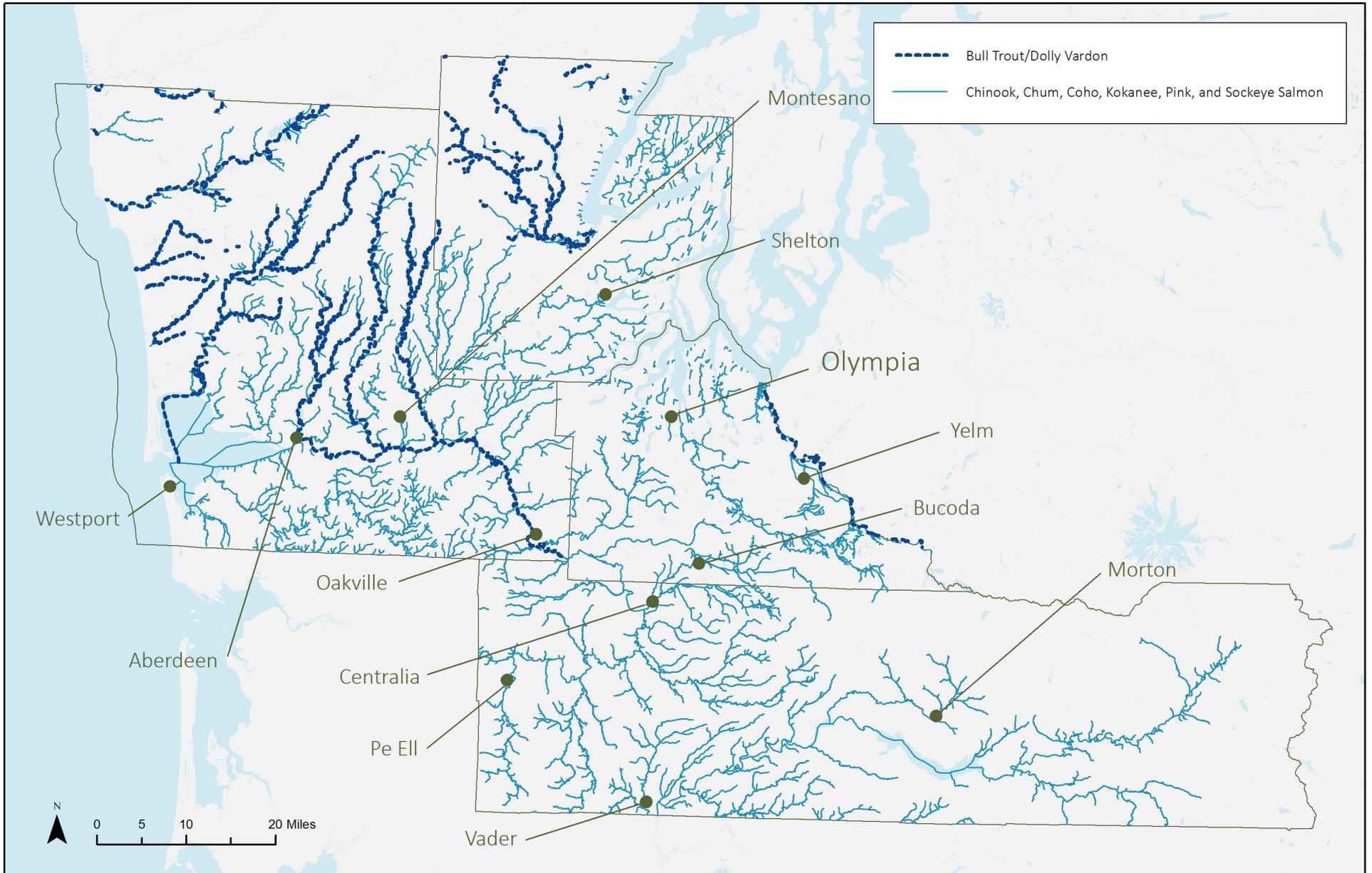
Source: Washington State Department of Fish and Wildlife, 2015

# Mazama Pocket Gopher

The Mazama Pocket Gopher is found primarily in Thurston and Mason Counties, but small portions of habitat are also found along the borders of Grays Harbor and Lewis Counties. The gophers prefer well-drained soils, characteristic of agricultural soils. They inhabit prairies and grasslands, as well as pastures, agricultural fields, and Christmas tree farms. United States Fish and Wildlife Service makes a distinction between four subspecies of pocket gopher, including: Olympia (*Thomomys mazama pugetensis*), Roy Prairie (*Thomomys mazama glacialis*), Tenino (*Thomomys mazama tumuli*), and Yelm (*Thomomys mazama yelmensis*) pocket gophers. Washington State Department of Fish and Wildlife does not distinguish between subspecies in habitat data. Of the listed species observed in the Study Area, pocket gopher habitat occurs on the greatest number of parcels, at over 100,000 parcels, as shown opposite in *Map 3.8 Mazama Pocket Gopher Observed Habitat*. Federal listing status for all four subspecies is Threatened. (Stinson, 2013)



# Salmon-bearing Streams



Map 3.9 Salmon-bearing Streams

Source: Washington State Department of Fish and Wildlife, 2014

# Salmon-bearing Streams

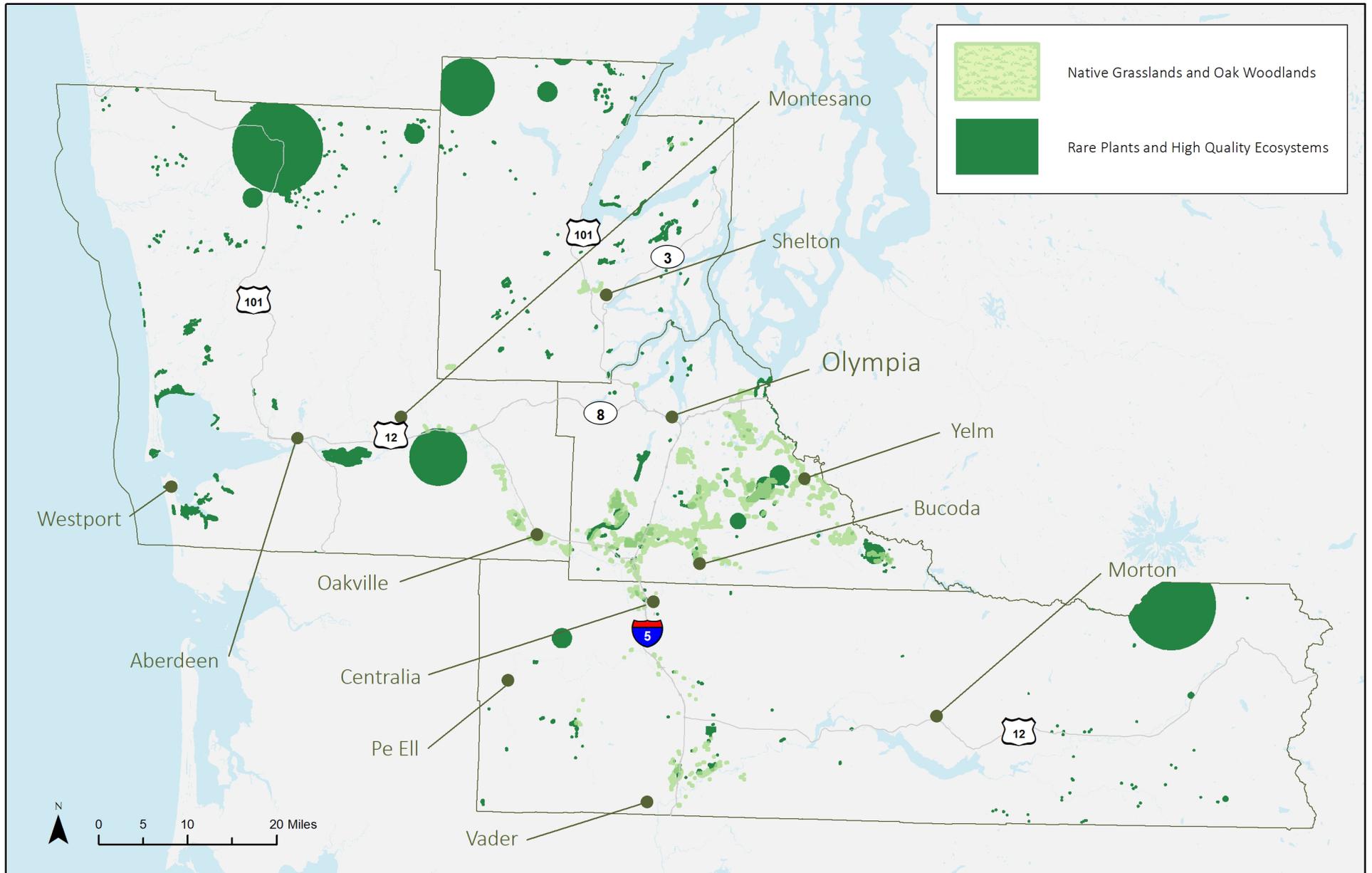
Salmon-bearing streams are an important conservation element in western Washington. Land stewardship at the riparian edge is critical for salmon species habitat maintenance. The streams which contain Bull Trout (*Salvelinus confluentus*) or Dolly Vardon (*Salvelinus malma*) fish species, primarily found in Grays Harbor County and Mason County, are given conservation priority, due to federal listing status as Threatened. Approximately 1,300 parcels are located along a known stream for the Bull Trout or Dolly Vardon species. The routes of these waterways are highlighted on *Map 3.9 Salmon-bearing Streams*, to the left.

In addition, the following types of salmon spawn in streams throughout the Study Area: Chinook, Chum, Coho, Kokanee, Pink, and Sockeye.

Parcels adjacent to salmon-bearing streams may also be prone to flooding, in which case, agriculture over other land uses may be preferred.

---

# Native Grasslands and Oak Woodlands & Rare Plants and High Quality Ecosystems



Map 3.10 Native Grasslands and Oak Woodlands & Rare Plants and High Quality Ecosystems

Source: Washington State Department of Natural Resources, 2008 & 2017

# Natural Heritage

Native Washington landscapes are found in close proximity to productive agricultural lands and, in some instances, it may be possible for large parcels of land to contain both, working landscapes and natural landscapes. Parcels containing these natural heritage sites, whether in part or whole, can represent important opportunities for conservation and management in the agricultural community. It is also possible for agricultural activities, such as managed livestock grazing, to provide benefits to native western Washington plant communities.

See *Map 3.10 Native Grasslands and Oak Woodlands & Rare Plants and High Quality Ecosystems*, to the left, for distribution of natural heritage sites over the Study Area. There are approximately 12,300 parcels which contain Native Grasslands and Oak Woodlands or Rare Plants and High Quality Ecosystems, or just over four (4) percent of the parcels within the Study Area.

## **Native Grasslands and Oak Woodlands**

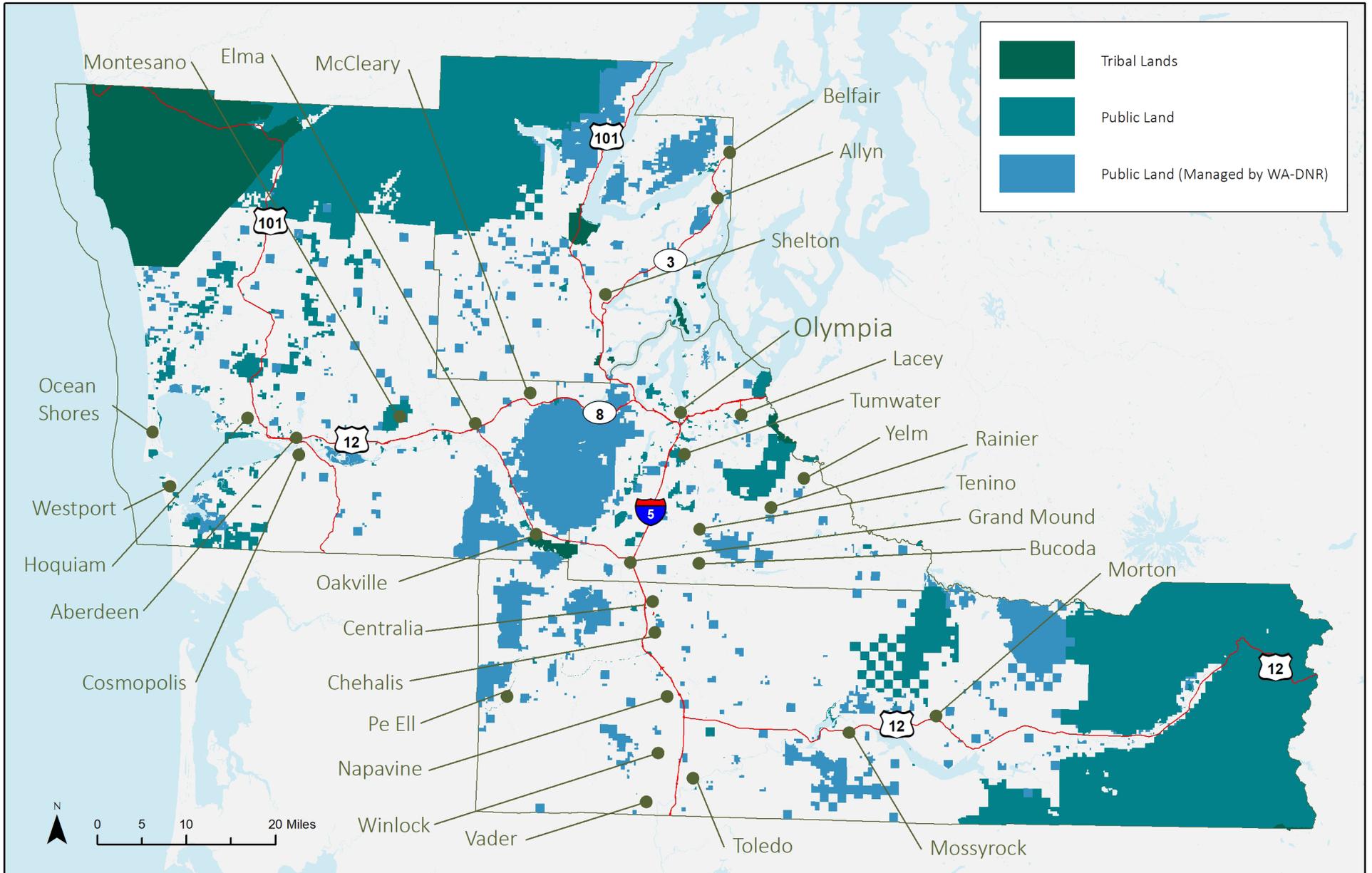
According to the Washington State Department of Natural Resources (2008), grasslands and oak woodlands native to the Puget Sound Lowland are among the most imperiled ecosystems in western Washington, and contain habitat for flora and fauna species of concern.

Native Grasslands and Oak Woodlands are found in the vicinity of agricultural activity in the four counties of the Study Area, but predominantly in Thurston County.

## **Rare Plants and High Quality Ecosystems**

Rare Plants and High Quality Ecosystems data sets are maintained for the Washington Natural Heritage Program, and identify sites which are rich in biodiversity. The elements included are rare vascular plant species, rare non-vascular plant species (such as moss, lichen, or fungus), terrestrial ecosystems of special concern, and wetland or aquatic ecosystems of special concern. The locations of rare plant populations are included as general areas-of-concern, and high-quality terrestrial and wetland ecosystems are included as precise locations. The sites occur throughout the Study Area.

# Tribal and Public Lands



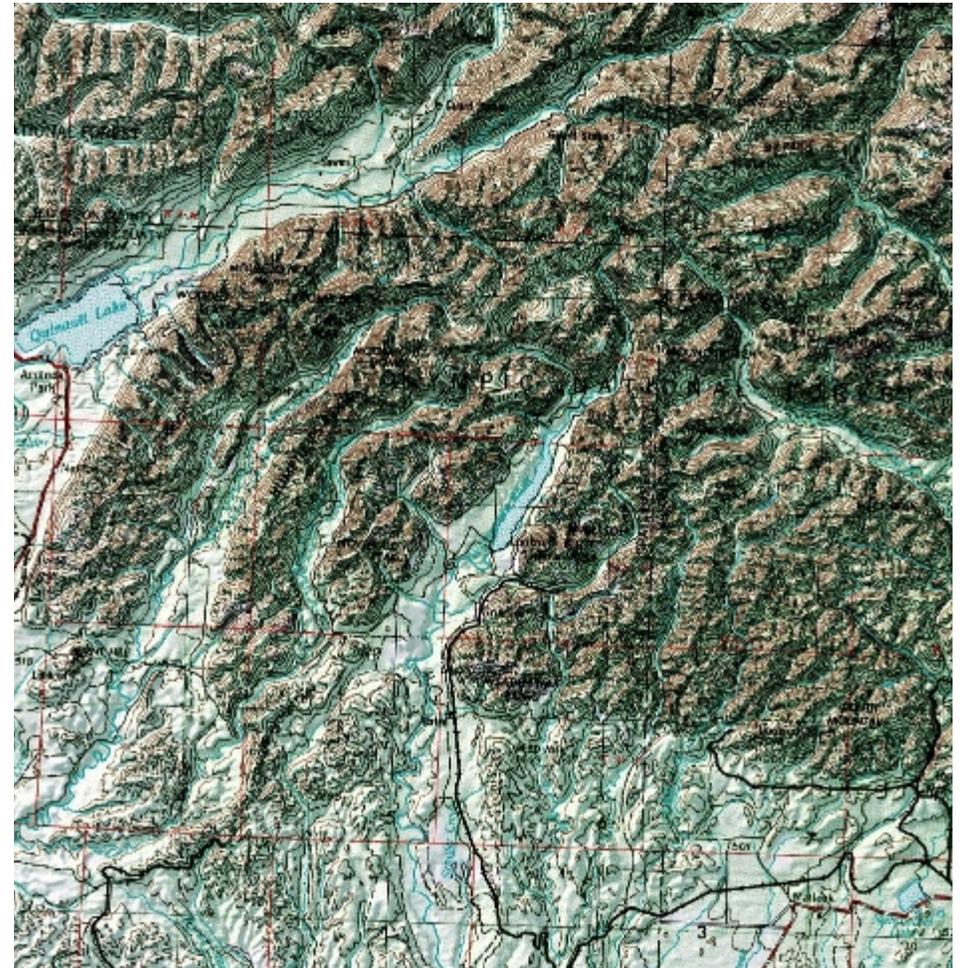
Map 3.1 | Tribal and Public Lands

Sources: U.S. Census Bureau, 2016; Washington State Department of Natural Resources, 2016

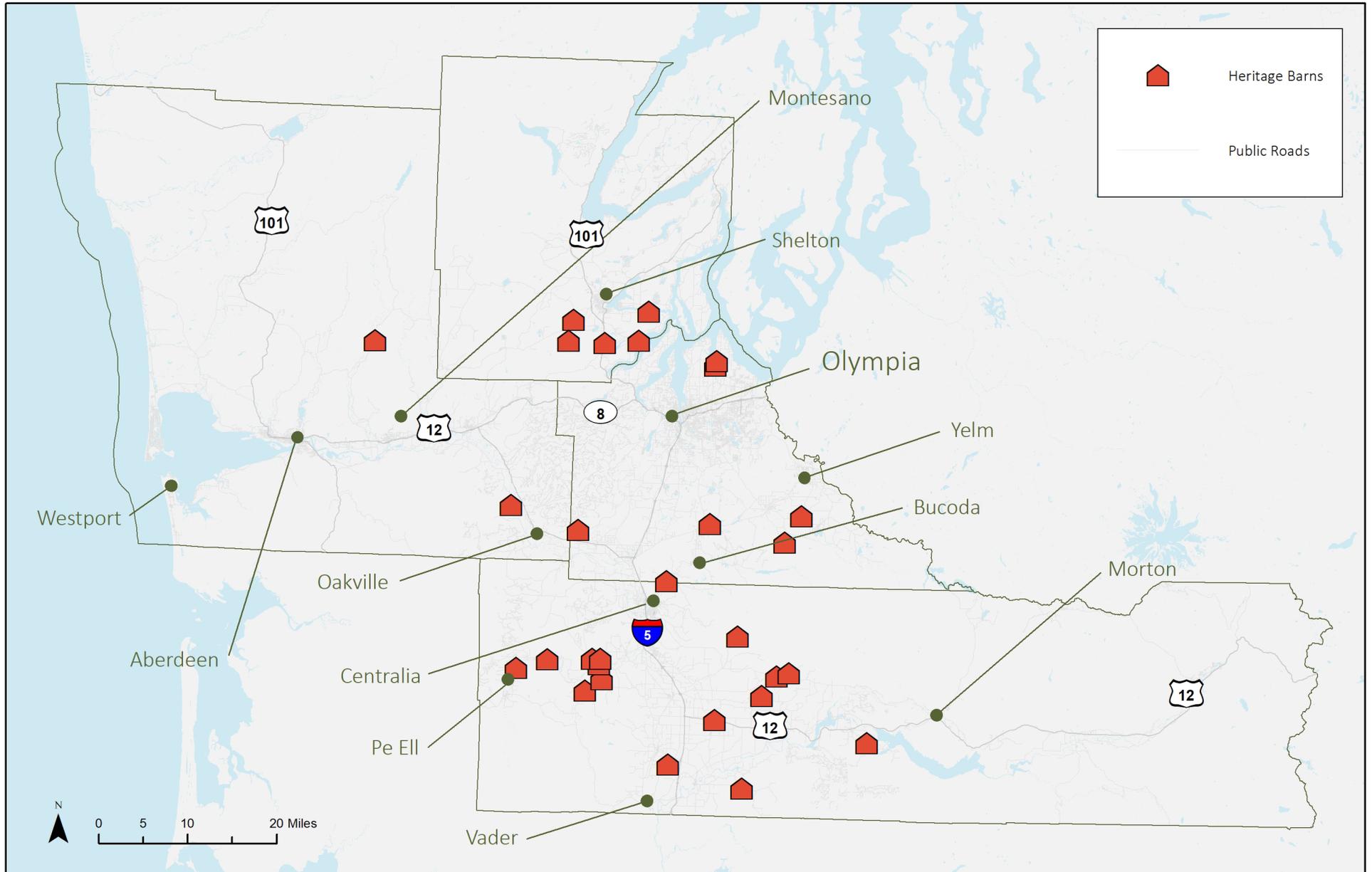
# Connectivity

Tribal and public lands include parcels or large areas of land with tribal, federal, state, county, or city ownership. These parcels have been excluded from consideration as priority conservation areas; however, the privately-owned parcels that are adjacent to these lands have the potential to increase landscape connectivity. This improves opportunities for the movement of plant and animal species around the landscape.

The location of tribally- and publicly-owned lands recognized for natural resource values are shown in the map to the left, *Map 3.1 | Tribal and Public Lands*, and represent ownership or management by Chehalis, Nisqually, Quinault, Skokomish, Squaxin, and Yakima Tribes, as well as federal, state, county, and city agencies. Lands managed by Washington State Department of Natural Resources are denoted in the map separately from other public entities.



# Heritage Barns



Map 3.12 Heritage Barns

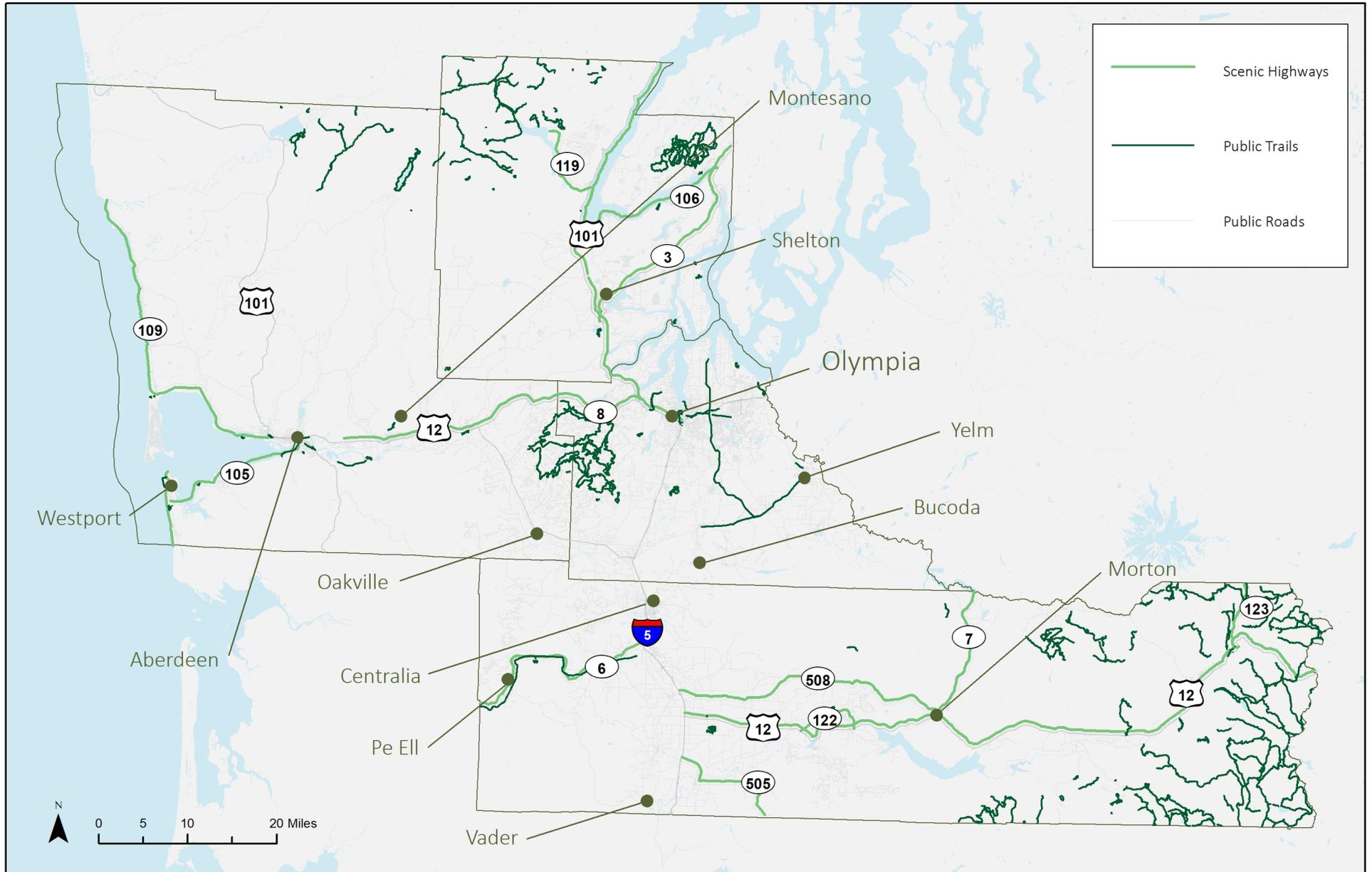
Source: Washington State Department of Archaeology and Historic Preservation, 2012

# Historical Significance

The Heritage Barn Register is maintained by the Washington State Department of Archaeology and Historic Preservation. There are a total of twenty-nine (29) Heritage Barns found across the Study Area, with more than half of the barns located in Lewis County. These sites are recognized as important features of the conservation landscape for their functional roles as both, an agricultural and a cultural amenity. See the map opposite, *Map 3.12 Heritage Barns*, for the distribution of these historically significant resources throughout the Study Area.



# Scenic Highways and Public Trails



Map 3.13 Scenic Highways and Public Trails

Sources: Washington State Department of Transportation, 2012; Washington State Recreation and Conservation Office, 2015

# Landscape Significance

Scenic Highways and Public Trails contribute to landscape significance; the location of these resources within the Study Area are depicted in the map opposite, *Map 3.13 Scenic Highways and Public Trails*. Protecting lands along scenic highways and public trails have the benefit of increasing project visibility within the community.

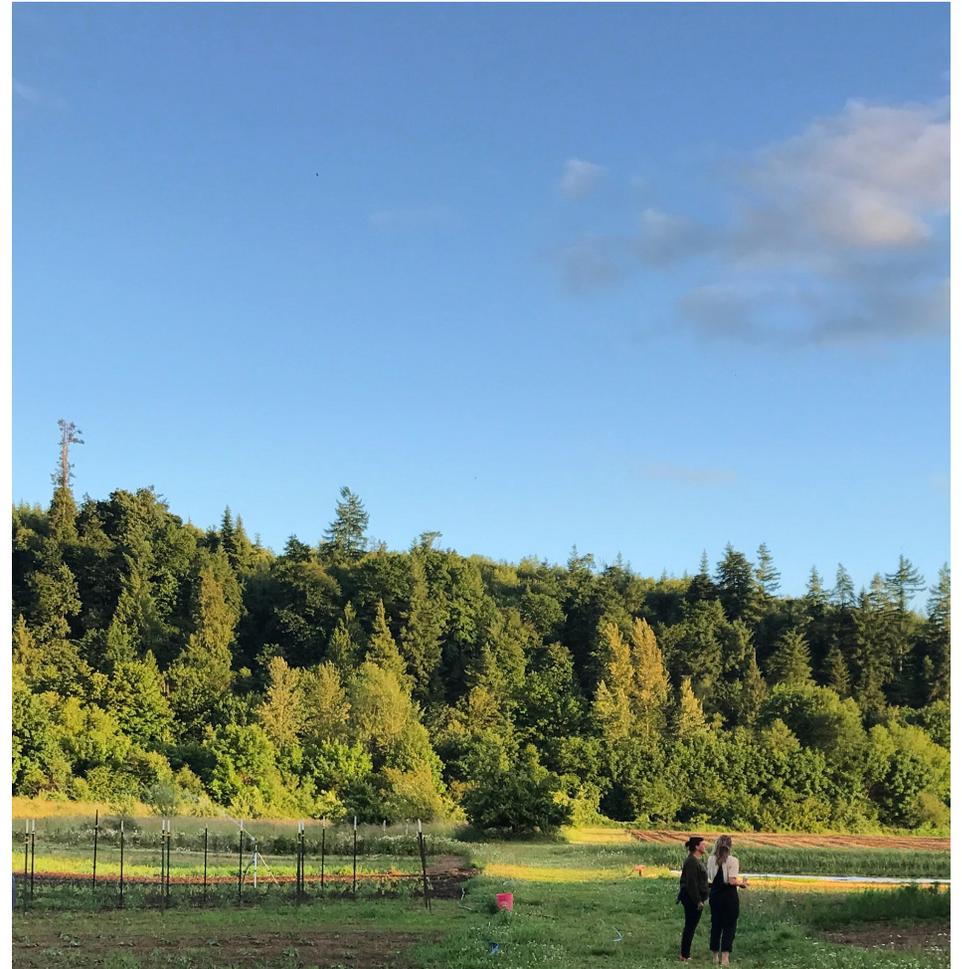
## Adjacent to Scenic Highway

Farmland and open space conservation can contribute to an attractive landscape, creating a public amenity enjoyed by residents and visitors to the region. Conservation acquisitions along Scenic Highways provide public value by preserving views and maintaining cultural and historic landscapes.

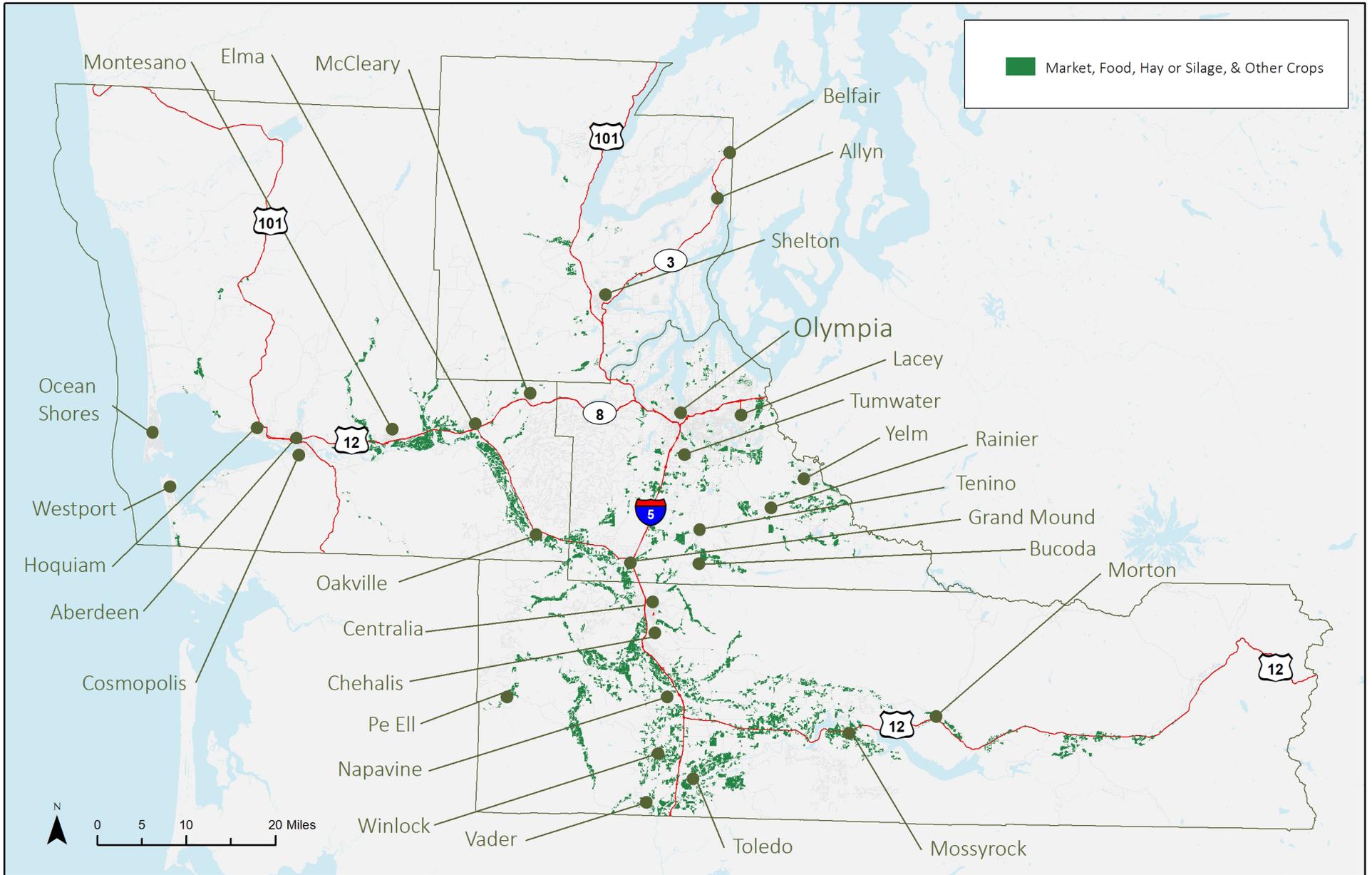
Scenic Highways are found in each of the four counties, and include State Routes 3, 6, 7, 8, 105, 106, 109, 119, 122, 123, 505, and 508, and U.S. Routes 12 and 101.

## Adjacent to Public Trail

Federal, state, county, and local trails are found throughout the Study Area. Conservation activity along these routes provides a public benefit by maintaining the scenic landscape for the enjoyment of trail users.



# Agricultural Productivity



Map 3.14 Agricultural Productivity

Source: Washington State Department of Agriculture, 2016

# Agricultural Productivity and Local Food Production

Washington State Department of Agriculture collects data on local crop productivity, which is useful for understanding current and future agricultural viability in the South Sound Region. Farmland conservation activities in areas with existing agricultural activity will help to support local agriculture-based economies, and may also significantly contribute to the local foods system.

In this Study, fields delineated as “market crops” are weighted most heavily under the assumption that those diverse farming operations have the greatest potential for sale in local markets, contributing to regional health and wellbeing.

The agricultural goods included in the crop categories are as follows:

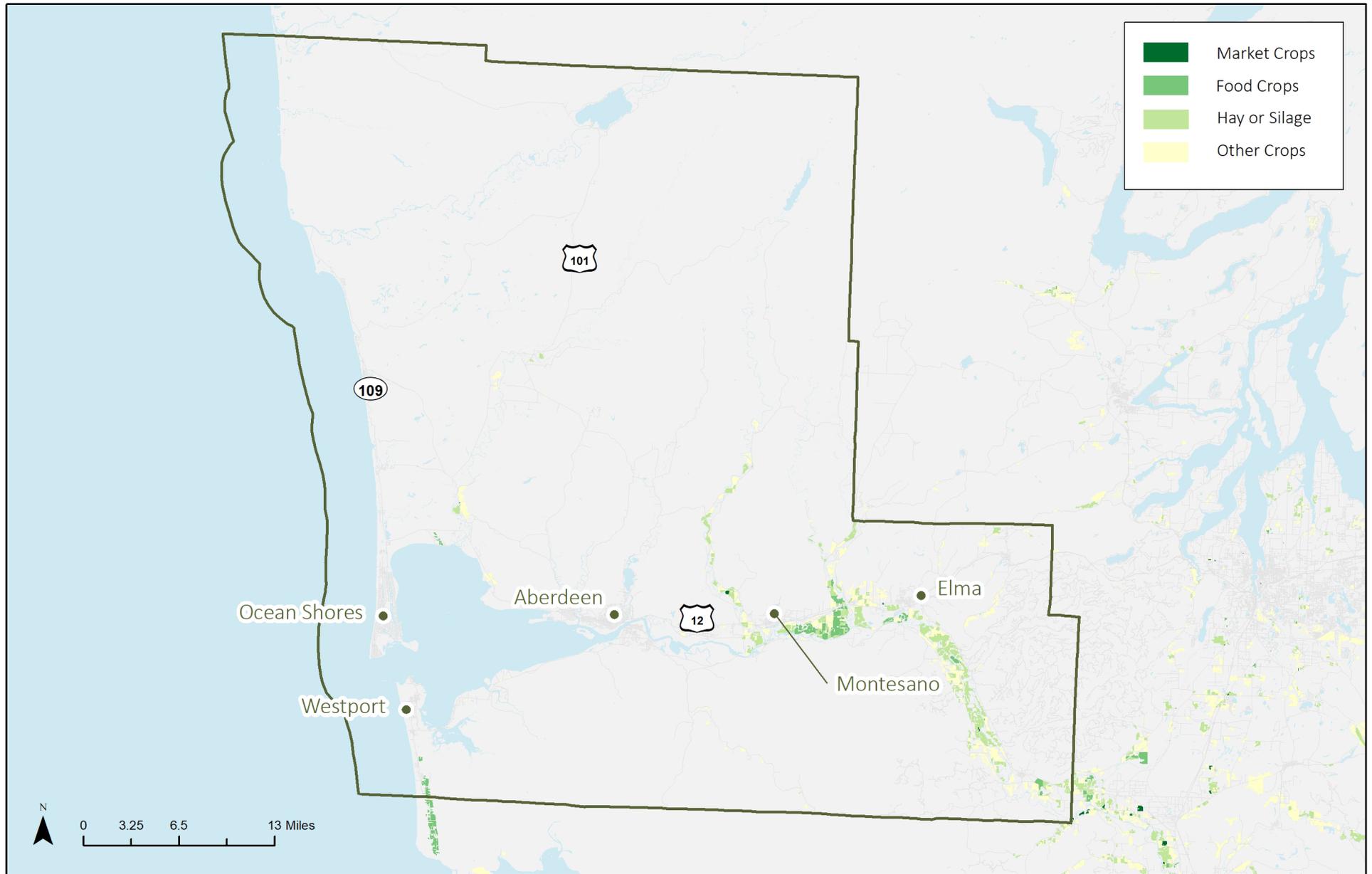
- Market Crops (fresh market crops of agricultural goods, with alternating rows of a variety of crop types)
- Food Crops (berry, cereal grain, orchard, and vegetable crops)
- Hay or Silage
- Other Crops (commercial tree; flower bulb; green manure; “herb,” including hops and marijuana; nursery; pasture; seed; turfgrass; vineyard; and “other”)

Overall agricultural productivity within the Study Area is shown in the map to the left, *Map 3.14 Agricultural Productivity*. The maps on the following pages (*Maps 3.15 - 3.18*) display individual crop categories, Market Crops, Food Crops, Hay or Silage, and “Other” Crops, by county.

Lewis County contains the majority of parcels which were weighted for the presence of market crops and food crops. Within these two categories, 57 percent of the parcels occur in Lewis County. In the other counties, Grays Harbor has 28 percent of total market and food crops parcels, and Thurston County has 17 percent. Mason County has two (2) percent of the total parcels that contain market or food crops.



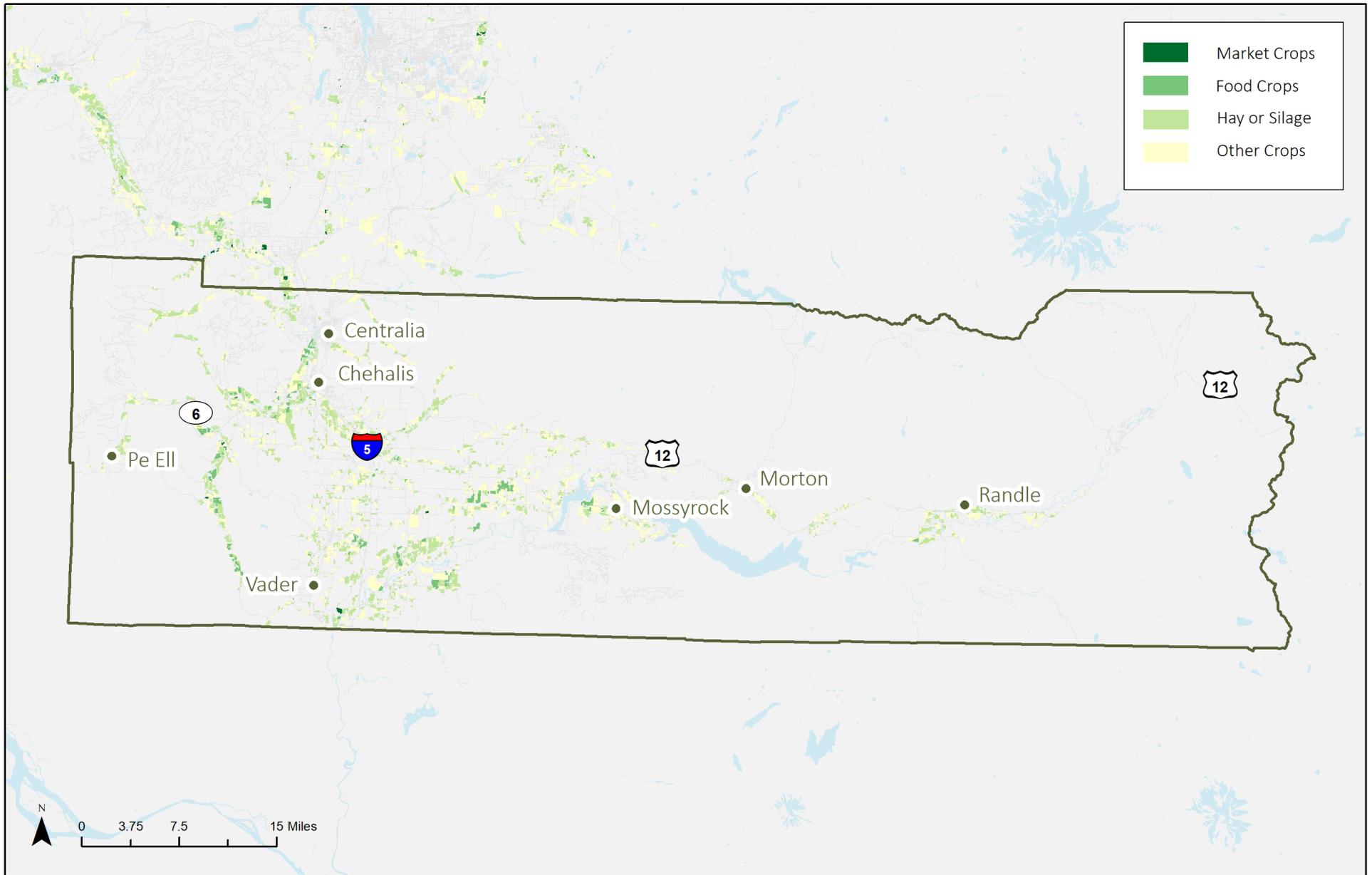
# Grays Harbor County Agricultural Productivity



Map 3.15 Grays Harbor County Agricultural Productivity by Crop Type

Source: Washington State Department of Agriculture, 2016

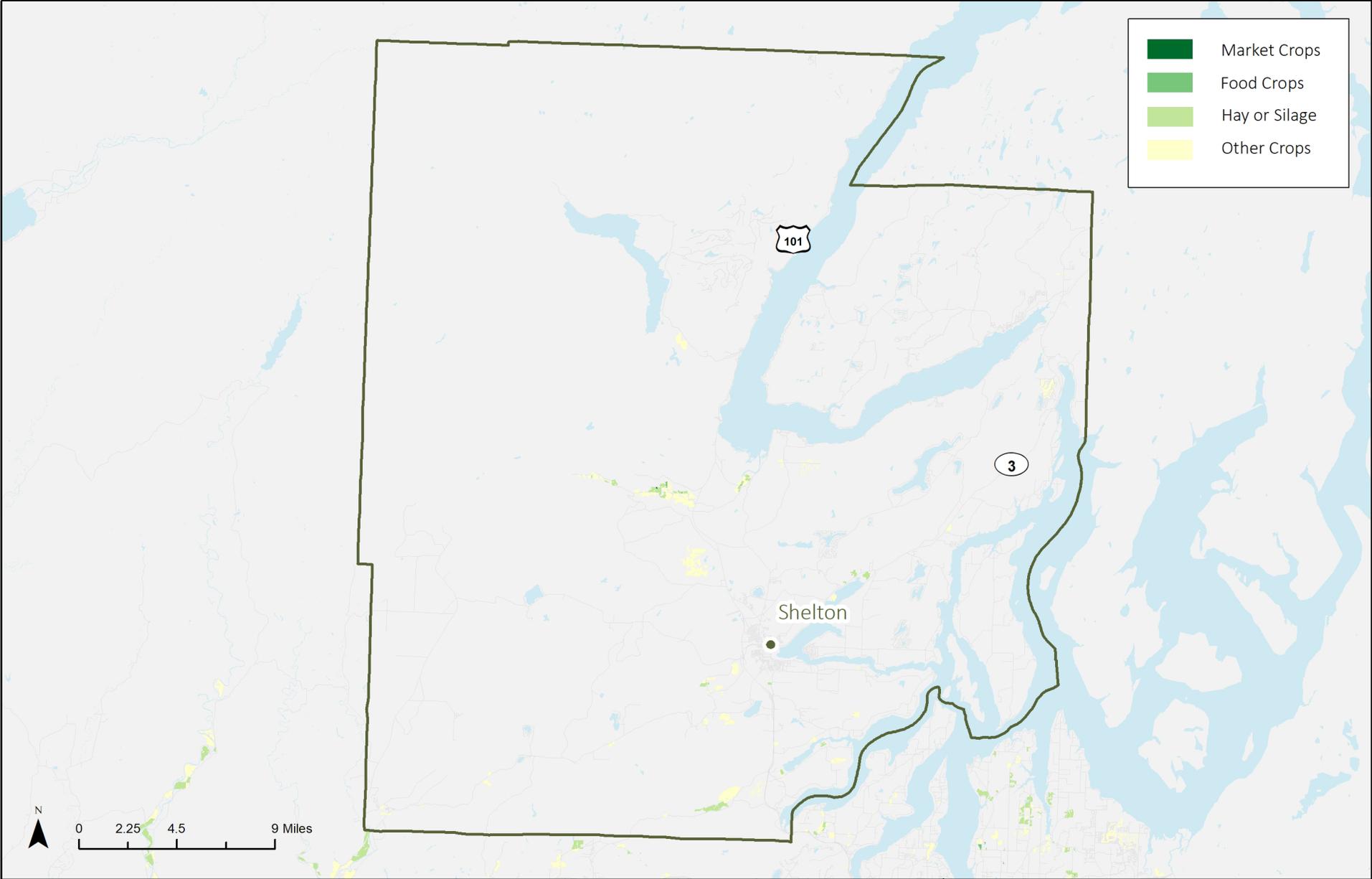
# Lewis County Agricultural Productivity



Map 3.16 Lewis County Agricultural Productivity by Crop Type

Source: Washington State Department of Agriculture, 2016

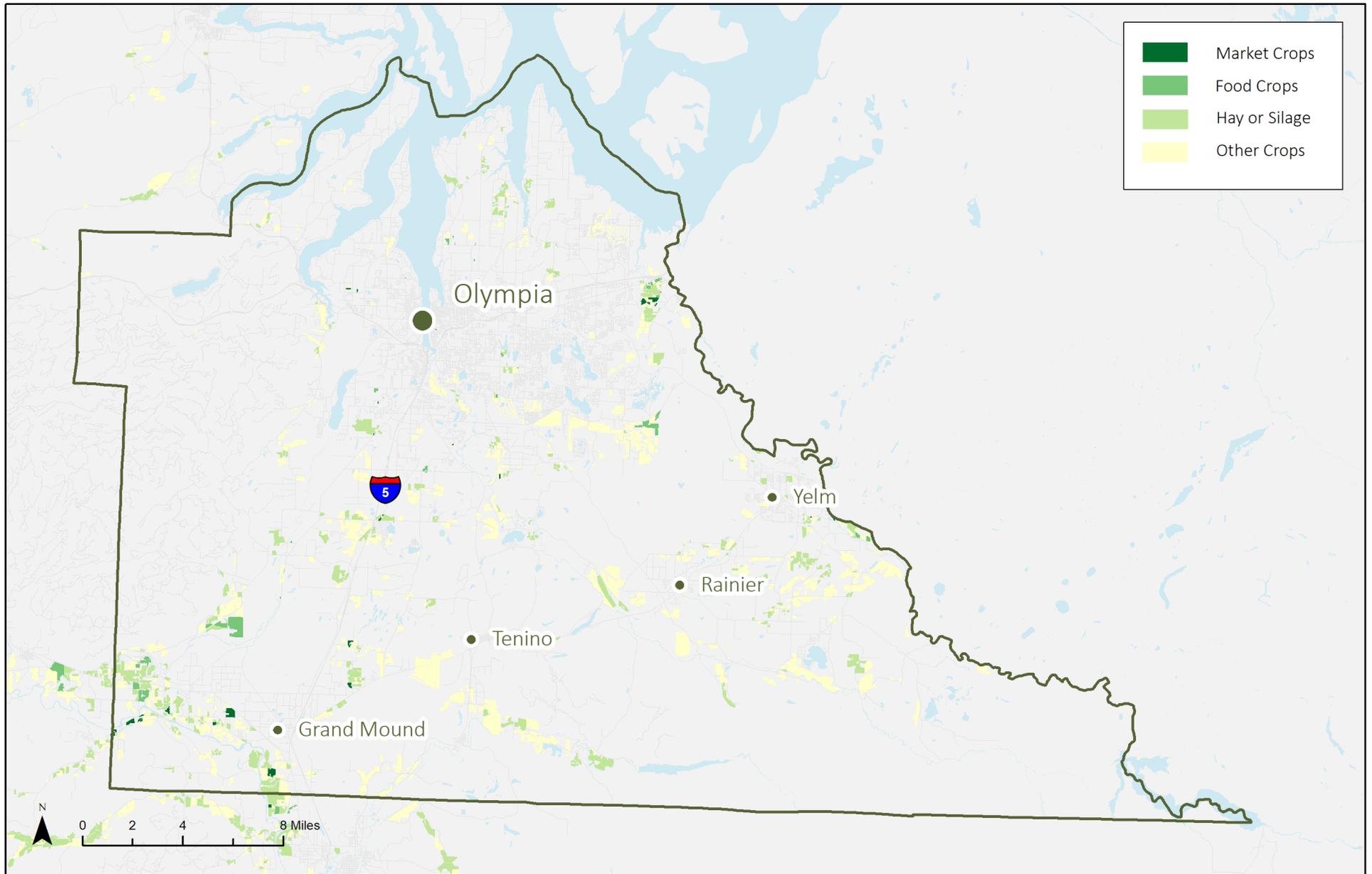
# Mason County Agricultural Productivity



Map 3.17 Mason County Agricultural Productivity by Crop Type

Source: Washington State Department of Agriculture, 2016

# Thurston County Agricultural Productivity



Map 3.18 Thurston County Agricultural Productivity by Crop Type

Source: Washington State Department of Agriculture, 2016

# 4. Priority Conservation Areas Results

The 294,215 parcels included in the Study Area were scored according to their conservation value, producing Priority Conservation Areas. Priority Conservation Areas are the results of clusters of high-scoring parcels, and are detailed in this chapter. The analysis is divided into three parts. First, the entirety of the conservation criteria is evaluated and presented for the highest-level overview, encompassing the broad conservation interests of SSCFLT, and includes the greatest number of parcels. Next, the analysis is narrowed to “farmland-only” criteria; these include the most essential elements (available for the purpose of this Study) for making decisions about the agricultural viability of a given parcel. The highest-scoring parcels are fewer in quantity, and emphasize slightly different regions for priority conservation. Lastly, the highest-scoring parcels from the previous two analyses are combined to create Highest-Priority Areas, which are found at the end of this section.

## Results: Conservation Criteria (“Top 500”)

Overall, the potential score range for parcels is between 0 and 36; the actual scores range between 0 and 24, shown in the following, *Table 4.1 Conservation Criteria Total Score Ranges Potential and Actual*. For reference, the weighting and scoring system for conservation criteria is detailed in Chapter 2, “Initial Study Approach.” Of all 294,215 parcels, the mean score is eight (8), and the median score is nine (9). Parcels with a score of 18 or greater total 582 parcels and represent approximately 0.2 percent of the total number of parcels.

Table 4.1 Conservation Criteria Total Score Ranges: Potential and Actual

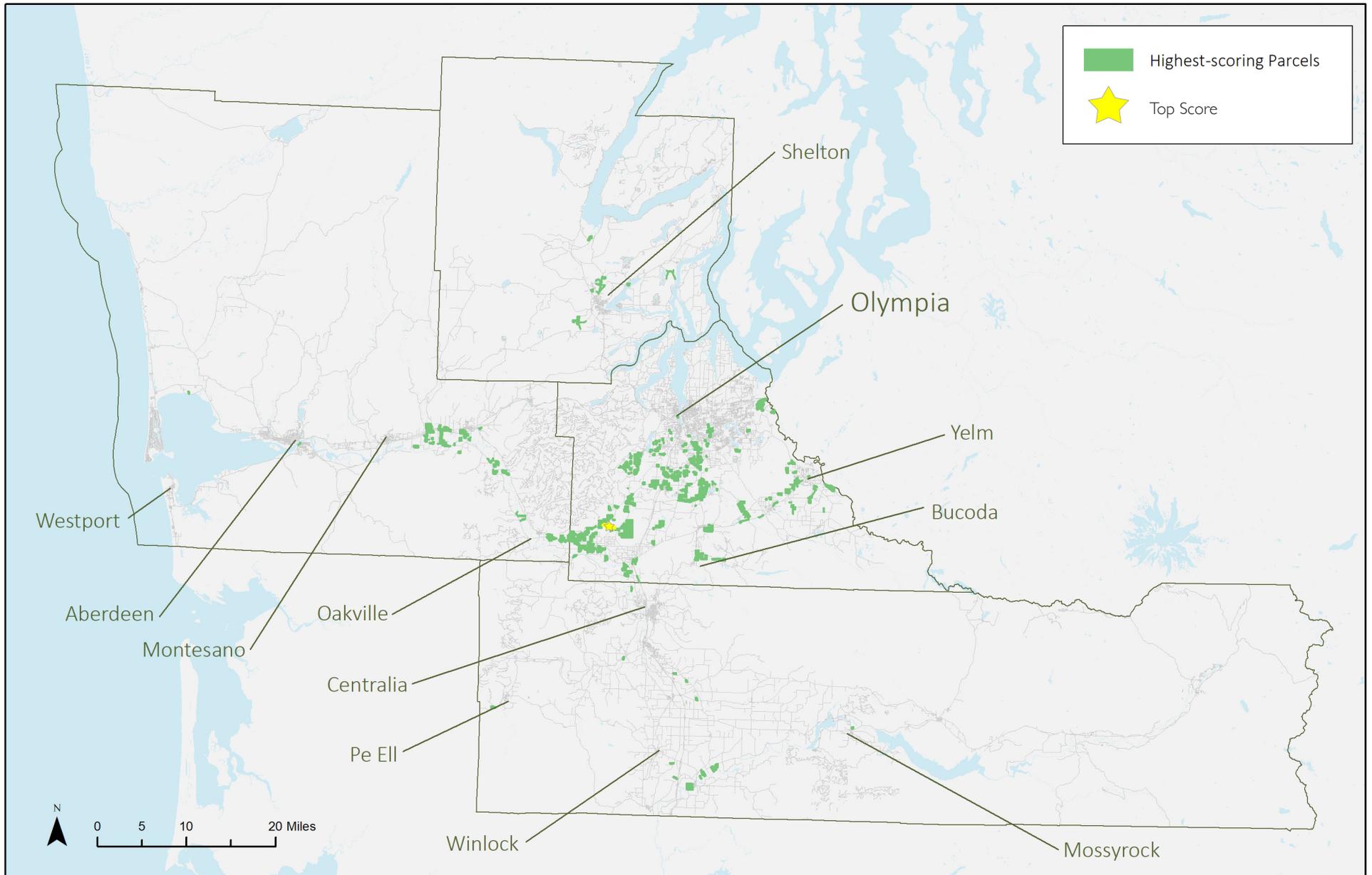
Conservation Criteria Total	Score Range
Score Range Potential	0 - 36
Score Range Actual	0 - 24

The 582 highest-scoring parcels total just under 20,000 acres (about 30 square miles), or approximately 0.5 percent of the total land mass of the Study Area (5,986 square miles). Highest-scoring parcels are found in each of the four counties in the Study Area: Grays Harbor, Lewis, Mason, and Thurston Counties. The locations of these parcels are depicted in the map opposite, *Map 4.1 Conservation Criteria Top 500 Highest-scoring Parcels*.

## Characteristics of the 582 Highest-scoring Parcels

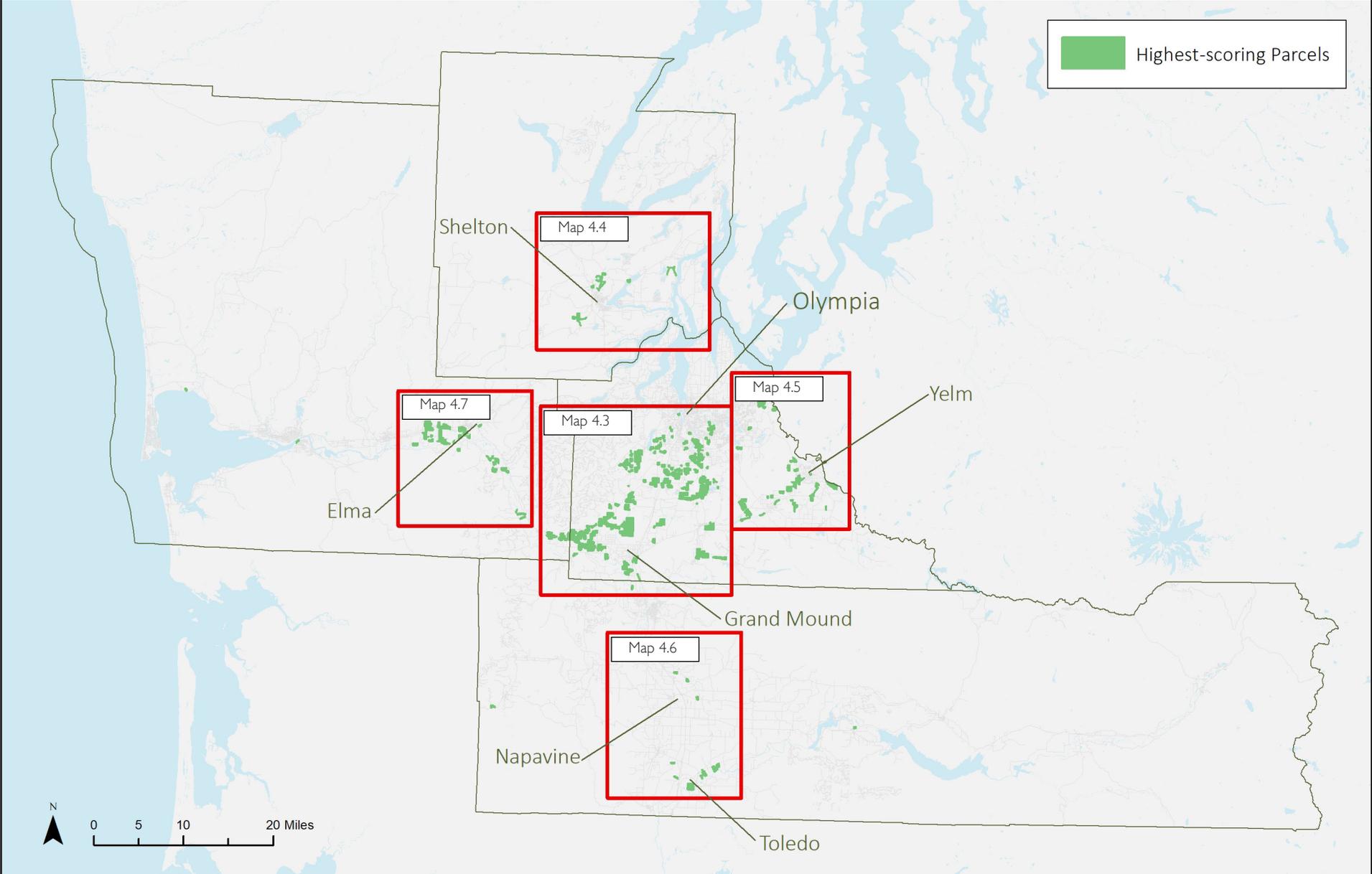
Of the 582 highest-scoring parcels, 79 percent (461 parcels) are located in Thurston County, 16 percent (89 parcels) are located in Grays Harbor County, three (3) percent (18 parcels) are found in Lewis County, and two (2) percent (14 parcels) are found in Mason County. The parcel receiving the highest score of 24 points is located in Thurston County, also shown in *Map 4.1*, at right. The results by county distribution are shown on the following page in *Table 4.2 Distribution-by-County of Conservation Criteria Highest-scoring Parcels*.

# Conservation Criteria Top 500 Highest-scoring Parcels



Map 4.1 Conservation Criteria Top 500 Highest-scoring Parcels

# Priority Conservation Areas



Map 4.2 Priority Conservation Areas

Table 4.2 Distribution-by-County of Conservation Criteria Highest-scoring Parcels

County	Number of Parcels	Percentage of Total
Grays Harbor County	89	16%
Lewis County	18	3%
Mason County	14	2%
Thurston County	461	79%
<b>Total</b>	<b>582</b>	<b>100%</b>

An analysis of the characteristics of these parcels follows in *Table 4.3 Attributes of Conservation Criteria Highest-scoring Parcels*, and in the summaries below.

Table 4.3 Distribution of Conservation Criteria Attributes Among Highest-scoring Parcels

Instances of Conservation Criteria	Number of Parcels	Percentage of Total
Prime Farmland: Occurrence of	444	76.3%
Parcel Size: 10 to 49.9 Acres	440	75.6%
Proximity to Urban Growth Area: 0.1 to 2.9 Miles	296	50.9%
Critical Habitat: One or more Species of Concern	540	92.8%
Salmon-bearing Streams: Adjacent to	281	48.3%
Native Grasslands or Oak Woodlands: Occurrence of	173	29.7%
Rare Plants and High Quality Ecosystems: Occurrence of	158	27.1%
Tribal or Public Lands: Adjacent to	116	19.9%
Heritage Barn: Presence of	1	0.2%
Scenic Highway: Adjacent to	21	3.6%
Public Trail: Adjacent to	27	4.6%
Agricultural Productivity: Market Crops, Food Crops, Hay or Silage, or "Other" Crops	368	63%

### Agricultural Values

A majority of the 582 highest-scoring parcels (76 percent), contain Prime Farmland-classified soils, and parcels range in size from just over an acre to nearly 600 acres. All parcels are located within at least 6.9 miles of an urban growth area boundary, with the majority (over 50 percent) located at a proximity of 0.1 to 2.9 miles from urban growth boundaries.

### Environmental Values

Most of the 582 highest-scoring parcels (93 percent) contain observed critical habitat for at least one species of concern; the majority of parcels, 53 percent, contain habitat for three species. Nearly half of the highest-scoring parcels are adjacent to a salmon-bearing stream. Regarding natural heritage sites, 30 percent of parcels in the priority areas contain native grasslands or oak woodlands, and 27 percent contain rare plants and high quality ecosystems. Approximately 20 percent of parcels are adjacent to tribal or public lands.

### Cultural Values and Priorities

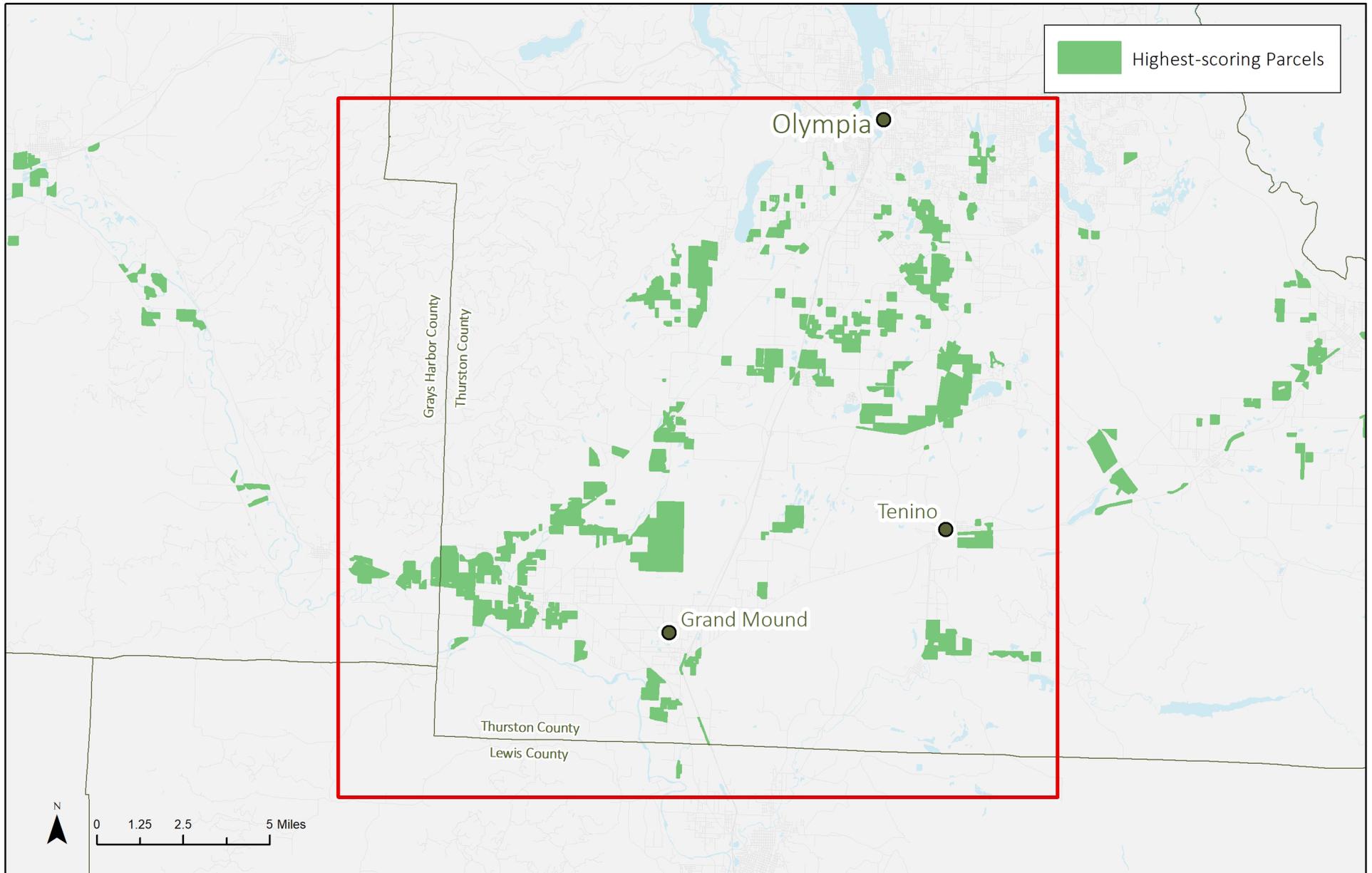
Of the top-scoring parcels, there is one which contains a Heritage Barn, located in Mason County. Fewer than 10 percent of the parcels are found adjacent to a scenic highway or public trail. Most of the parcels along a scenic highway are in Grays Harbor County, and most of the parcels located adjacent to a public trail are found in Thurston County.

Regarding agricultural productivity and local food production, over 15 percent of the highest-scoring parcels are currently producing market or food crops. Another 50 percent of the parcels are currently either used for hay or silage, or "other" crops. Nearly one-third of the parcels are not currently agriculturally productive.

### Priority Conservation Areas

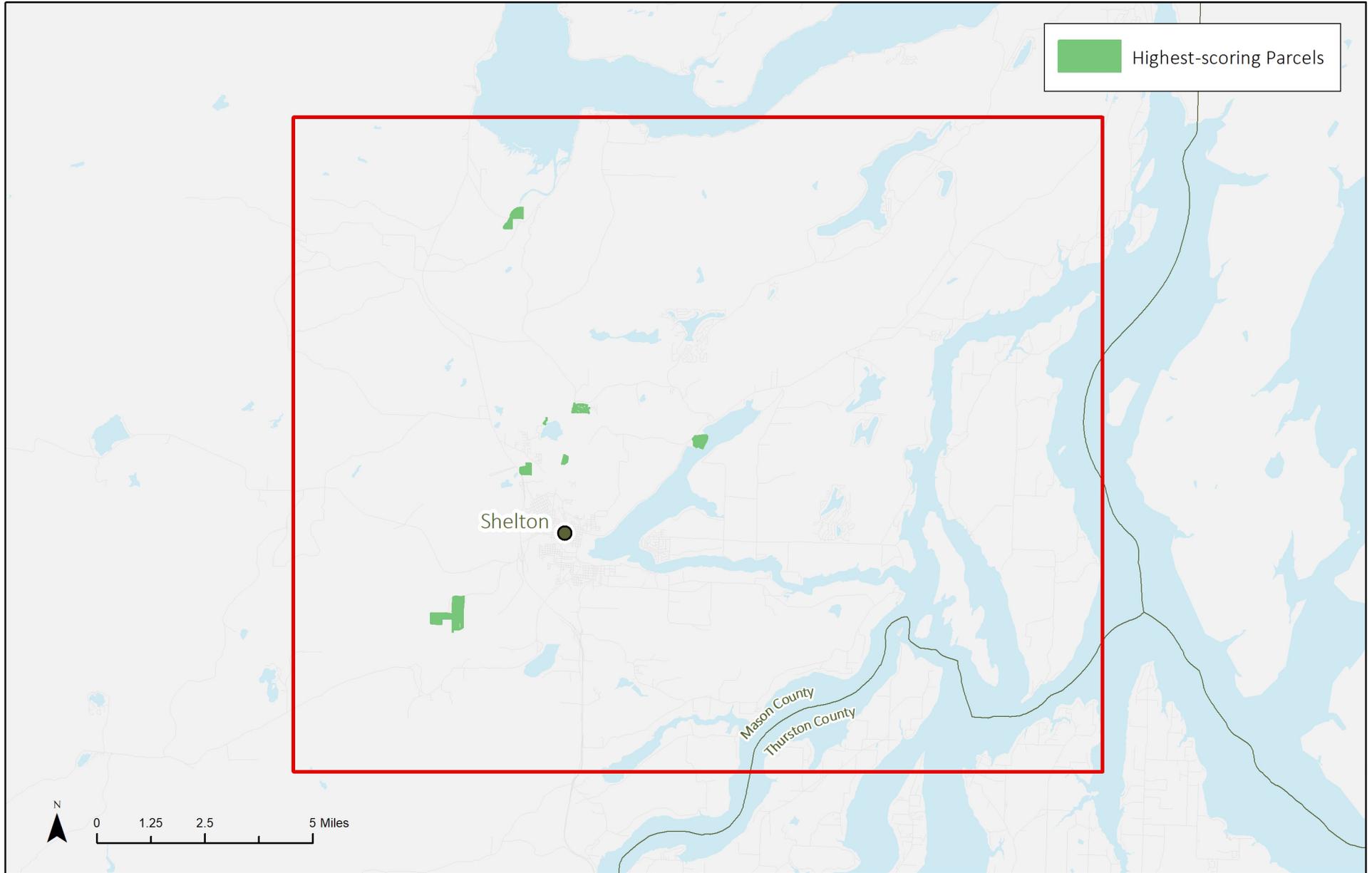
The map at left, *Map 4.2 Priority Conservation Areas*, indicates the location of the Priority Conservation Areas, and *Maps 4.3 - 4.7*, following, provide more detail. Priority Conservation Areas include: Central Thurston County, Eastern Mason County, Eastern Thurston County, Western Lewis County, and Eastern Grays Harbor County.

# Central Thurston County Priority Conservation Area



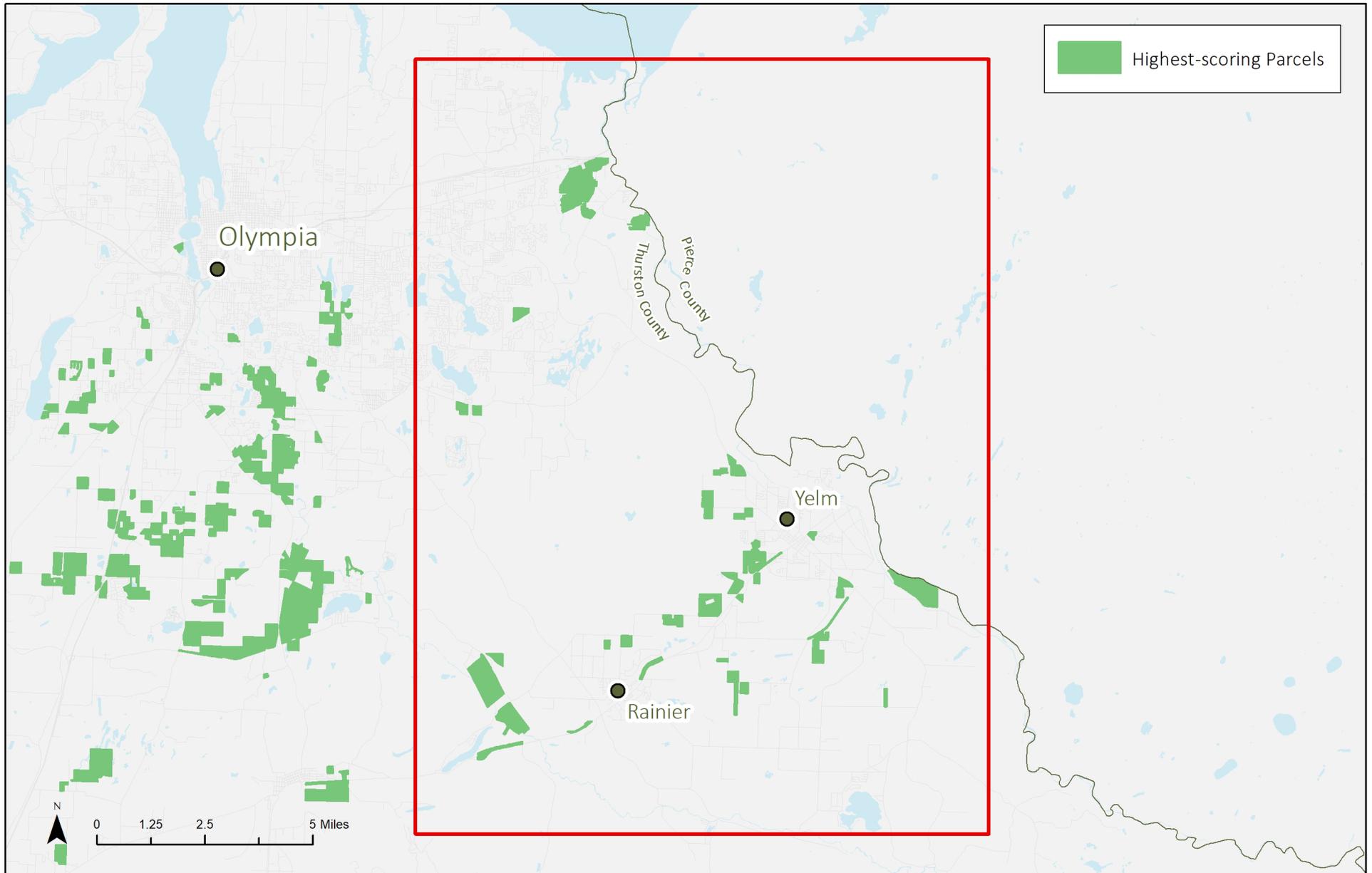
Map 4.3 Central Thurston County-Western Grays Harbor County

# Eastern Mason County Priority Conservation Area



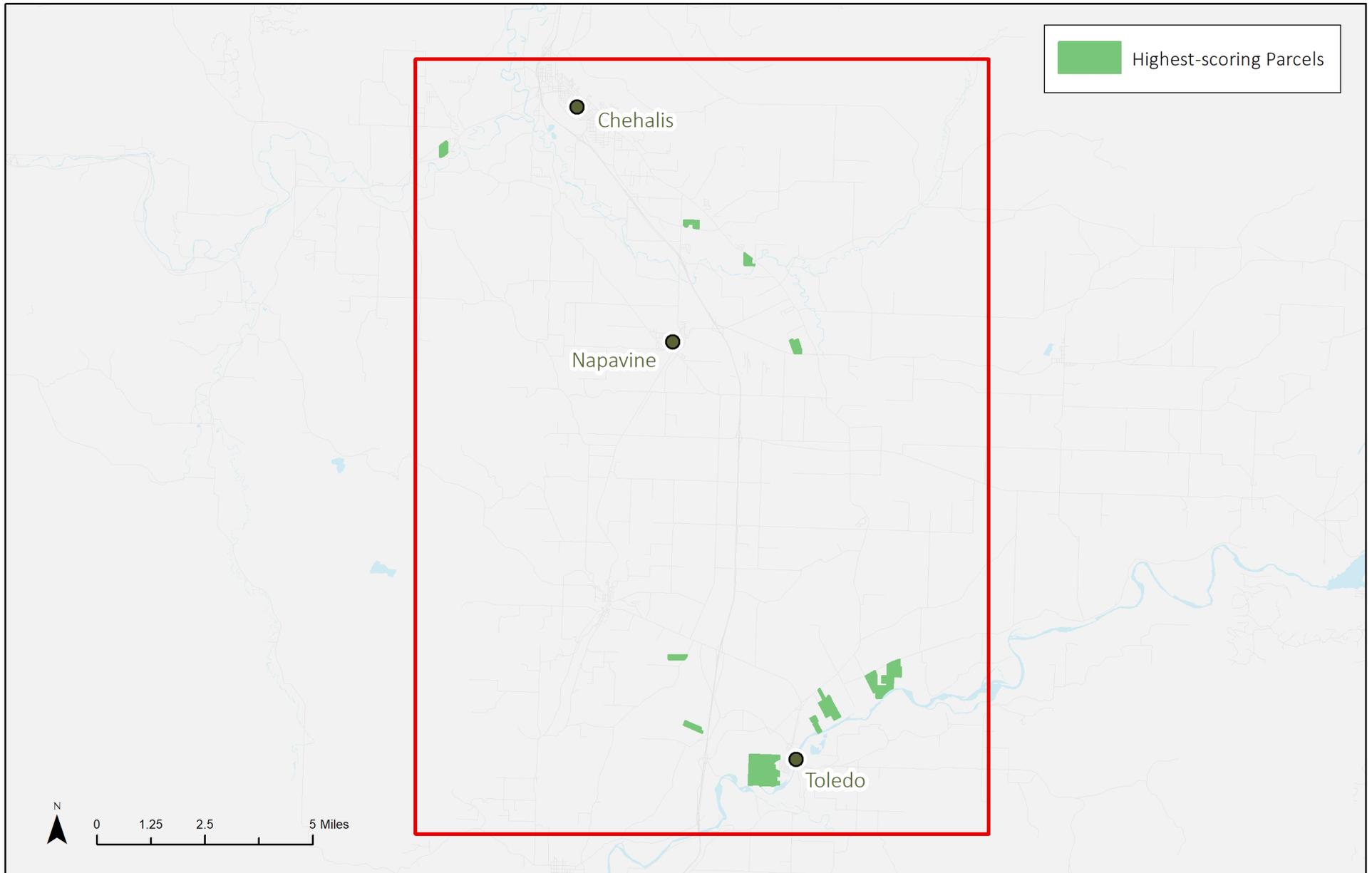
Map 4.4 Eastern Mason County Priority Conservation Area

# Eastern Thurston County Priority Conservation Area



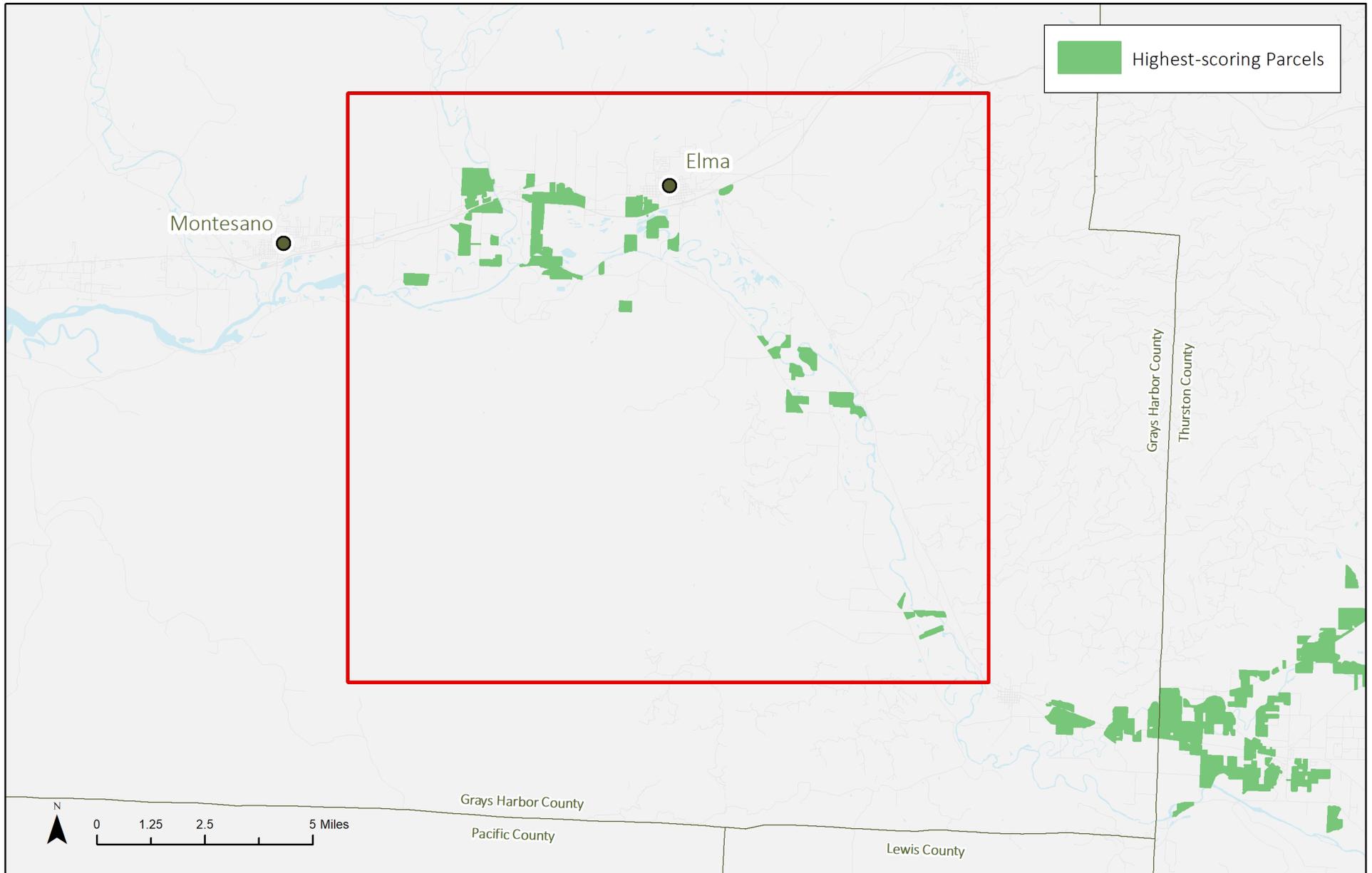
Map 4.5 Eastern Thurston County Priority Conservation Area

# Western Lewis County Priority Conservation Area



Map 4.6 Western Lewis County Priority Conservation Area

# Eastern Grays Harbor County Priority Conservation Area



Map 4.7 Eastern Grays Harbor Priority Conservation Area

## Results: Farmland-only Criteria (“Top 250”)

In this section, the Study includes an analysis of strictly farmland conservation attributes. The “farmland-only” conservation criteria include four elements: agricultural soils, parcel size, agricultural productivity, and Heritage Barn. In the same manner as the full conservation criteria analysis, these represent the parcels with greatest farmland conservation value from the Study Area’s 294,215 total parcels.

The outcome is found in the map on the following page, *Map 4.8 Farmland Conservation Criteria Top 250 Highest-scoring Parcels*. The results for farmland-only criteria include 254 high-scoring parcels, totaling nearly 7,500 acres. The single highest-scoring parcel is found to have a total score of 15 out of 15 possible points, and is located in Lewis County, the location of which is also depicted in *Map 4.8*.

### Characteristics of the 254 Highest-scoring Parcels

In this analysis, the majority of high-scoring parcels are found in Lewis County (57 percent), followed by Grays Harbor County (24 percent), and Thurston County (17 percent). Only three (3) percent of high-scoring parcels were located in Mason County. This distribution is shown in *Table 4.4 Distribution-by-County of Farmland-only Criteria Highest-scoring Parcels*, below.

Table 4.4 Distribution-by-County of Farmland-only Criteria Highest-scoring Parcels

County	Number of Parcels	Percentage of Total
Grays Harbor County	61	24.0%
Lewis County	144	56.7%
Mason County	42	2.8%
Thurston County	7	16.5%
<b>Total</b>	<b>254</b>	<b>100%</b>

All of the parcels were found to have Prime Farmland soils, and nearly all (95 percent) were in the size range of 10 to 49.9 acres. All of the parcels are agriculturally productive, with 80 percent currently producing food crops, and another 16 percent producing specifically market crops. The remaining parcels are either producing hay or silage, or “other” crops. In this scenario, a total of 10 high-scoring parcels include a Heritage Barn.

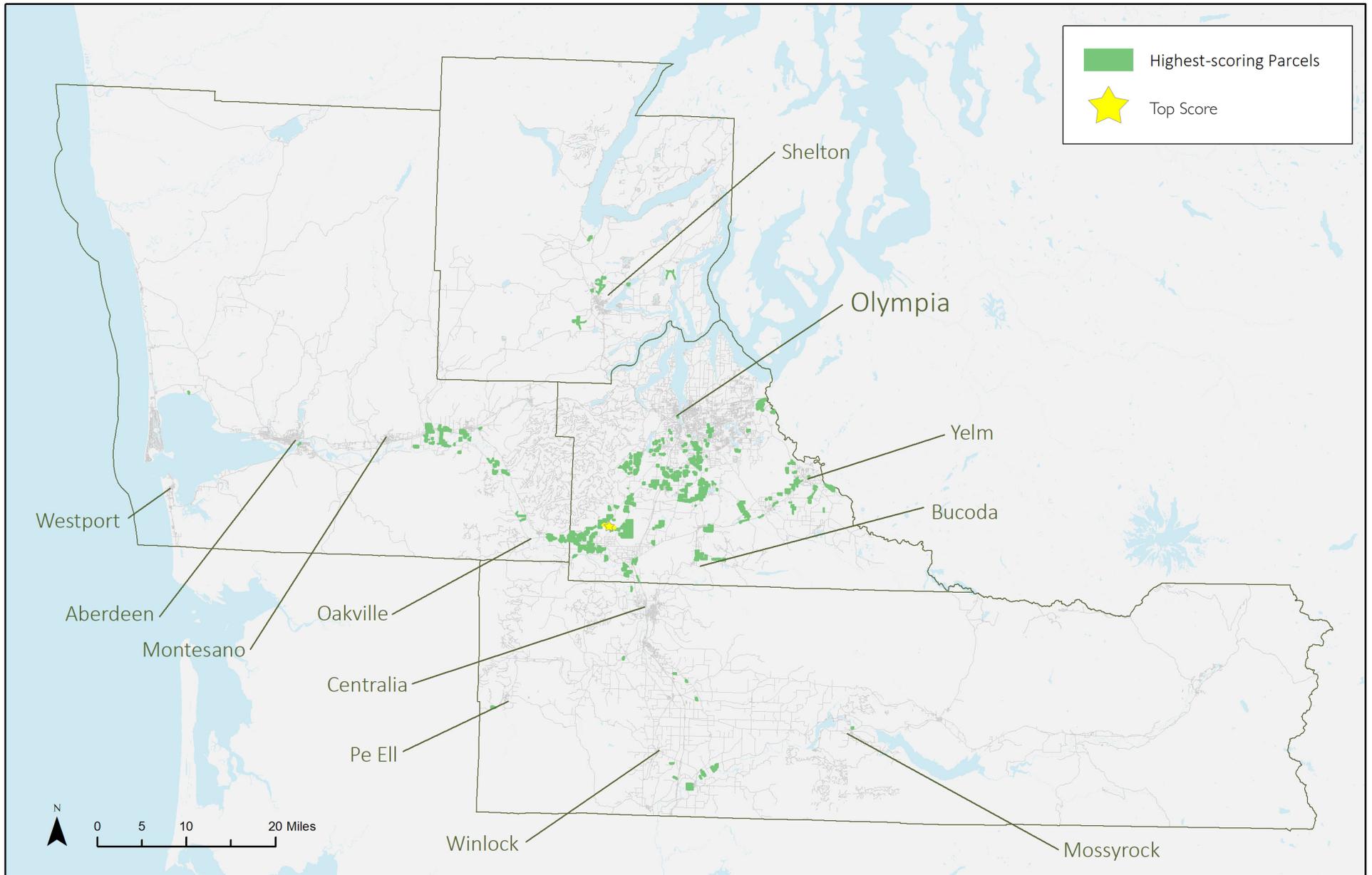
The distribution of farmland-only criteria among high-scoring parcels is summarized below in *Table 4.5 Distribution of Farmland-only Criteria Attributes Among Highest-scoring Parcels*.

Table 4.5 Distribution of Farmland-only Criteria Attributes Among Highest-scoring Parcels

Instances of Farmland-only Criteria	Number of Parcels	Percentage of Total
Prime Farmland: Occurrence of	254	100%
Parcel Size: 10 to 49.9 Acres	241	94.9%
Heritage Barn: Presence of	10	3.9%
Agricultural Productivity: Market Crops or Food Crops	246	96.9%
Agricultural Productivity: Hay or Silage or “Other” Crops	8	3.1%

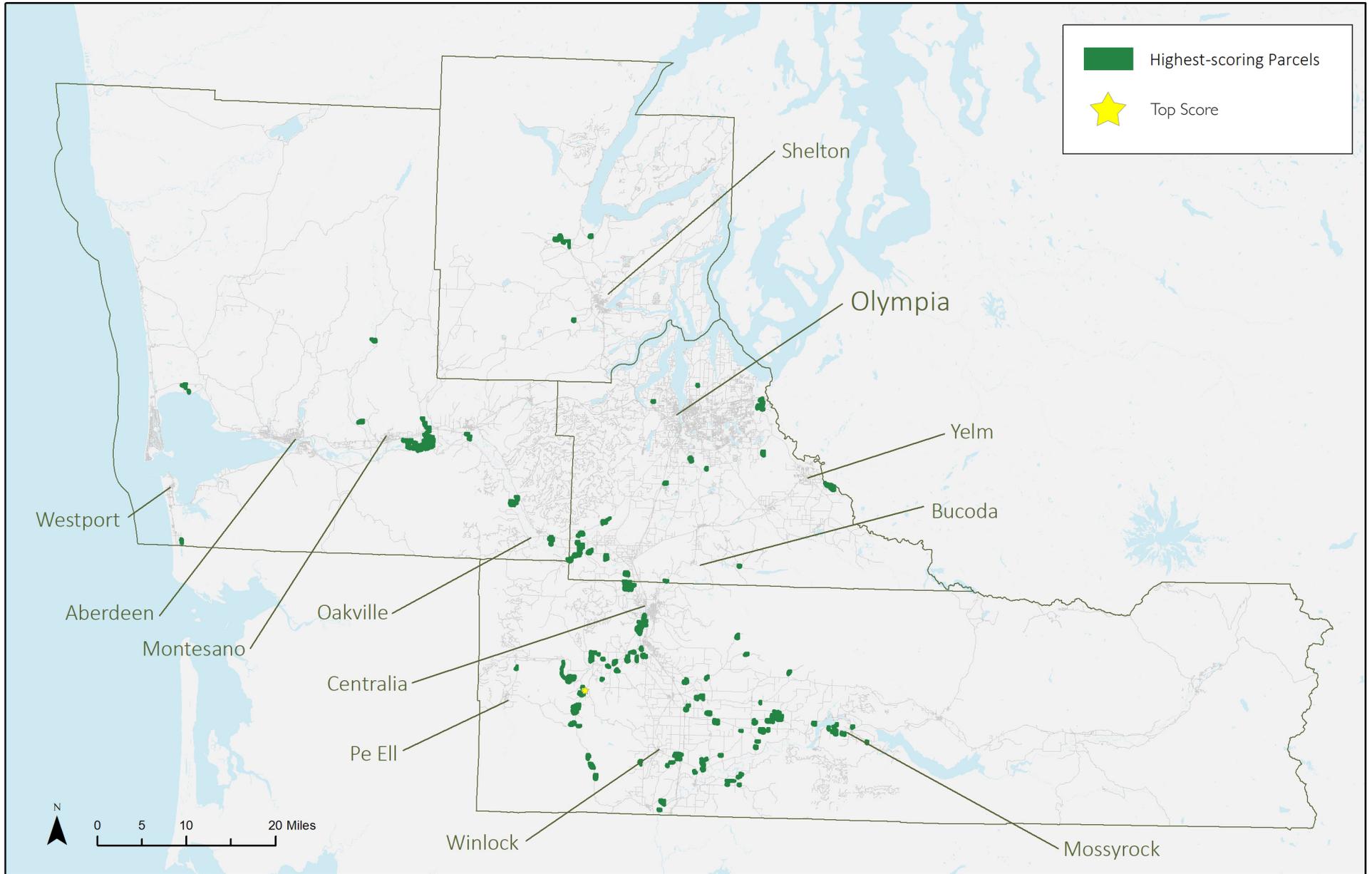
The following pages include *Map 4.8 Farmland Conservation Criteria Top 250 Highest-scoring Parcels*, as well as (*Map 4.1 Conservation Criteria Top 500 Highest-scoring Parcels*), to provide a visual comparison of the results of the two analyses.

# Conservation Criteria Top 500 Highest-scoring Parcels



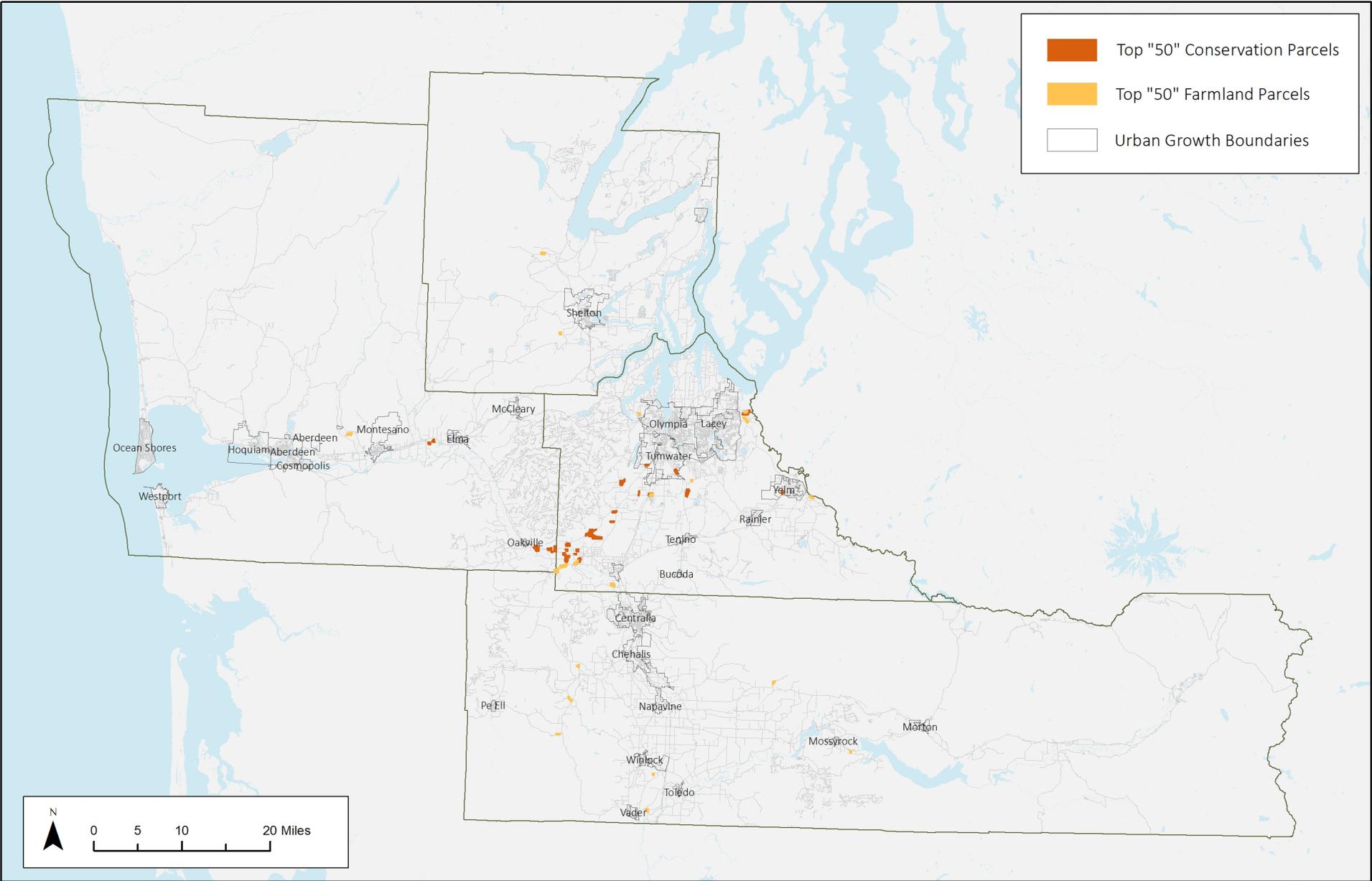
Conservation Criteria Top 500 Highest-scoring Parcels

# Farmland Conservation Criteria Top 250 Highest-scoring Parcels



Map 4.8 Farmland Conservation Criteria Top 250 Highest-scoring Parcels

# Top 50 Highest-scoring Parcels for Conservation Criteria and Farmland-only Criteria



Map 4.9 Top 50 Highest-scoring Parcels for Conservation Criteria and Farmland-only Criteria

## In Conclusion: Highest-Priority Areas Combining Full Conservation Criteria with Farmland-only Criteria ("Top 50")

Combining the top "50" highest-scoring parcels from each of these two analyses, full conservation criteria and farmland-only criteria, generates the map at right, *Map 4.9 Top 50 Highest-scoring Parcels for Conservation Criteria and Farmland-only Criteria*. These parcels are used to depict how a lifetime of acquisition projects may look. Of the two sets of criteria, there are four parcels which are counted in both analyses. All four of the double-counted parcels are located in Thurston County.

A total of 49 parcels scored 21 points or greater under the full conservation criteria analysis, comprising 1,884 acres. The majority of these parcels, 78 percent (38 parcels), are found in Thurston County and the remaining 22 percent (11 parcels) are located in Grays Harbor County.

A total of 35 parcels scored 13 or greater in the farmland-only criteria analysis, which account for another 915 acres. These parcels are located in each of the four counties. The majority of parcels, 54 percent (19 parcels) are again found in Thurston County. Another 23 percent (8 parcels) are located in Lewis County, 14 percent (5 parcels) are located in Grays Harbor County, and 9 percent (3 parcels) are located in Mason County.

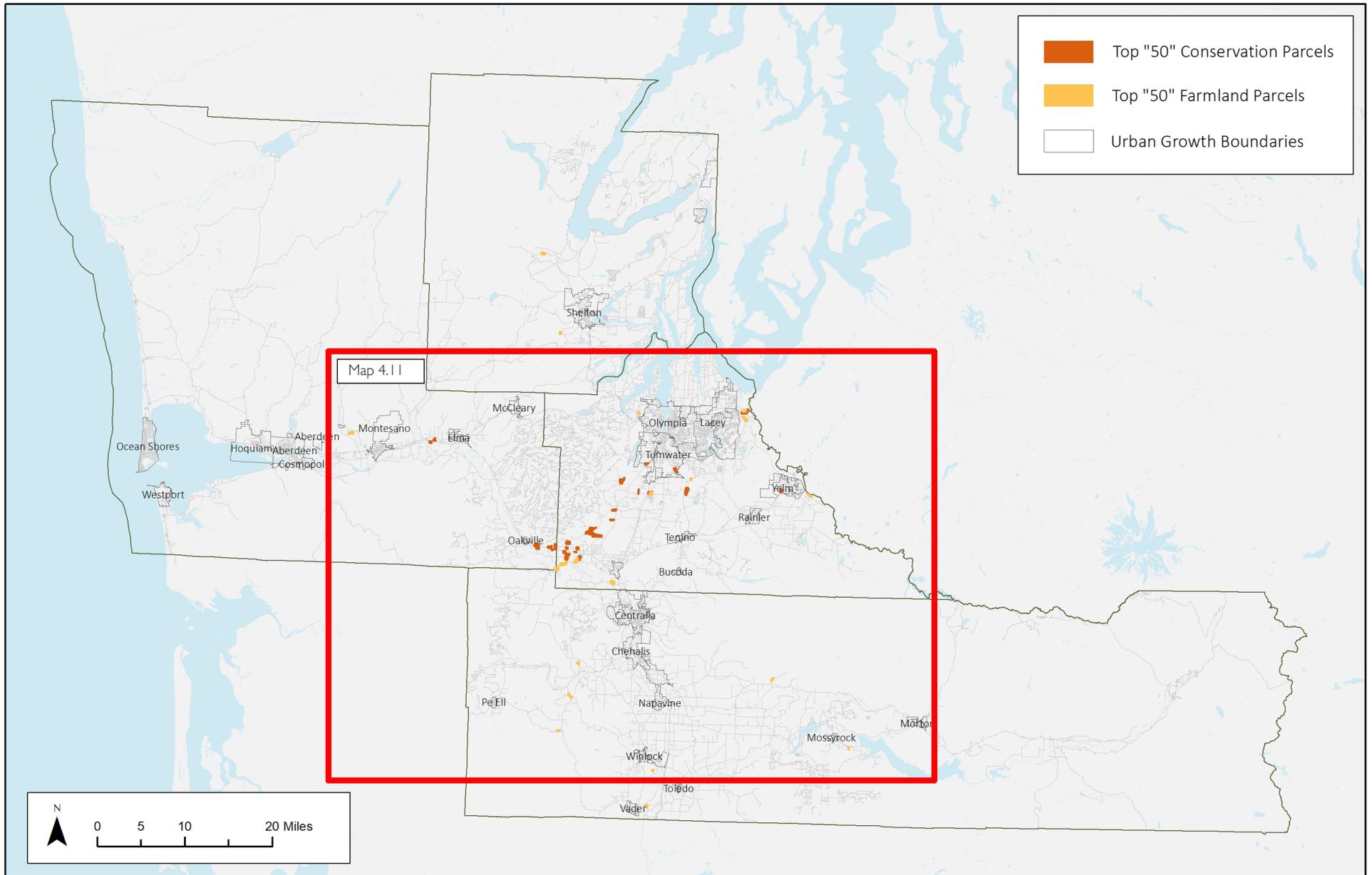
The following maps highlight the area with the greatest concentration of conservation criteria and farmland-only criteria high-scoring parcels, shown as an inset in *Map 4.10 Priority Area for Top 50 Highest-scoring Parcels for Conservation Criteria and Farmland-only Criteria*, and in greater detail in *Map 4.11 Highest-Priority Areas*.

The attributes of the individual parcels, 84 in total (with four double-counted), can be found in the pages following the maps. The tables show

the parcels ranked from highest-to-lowest score. Conservation criteria high-scoring parcels are found in *Table 4.6 Conservation Criteria Priority Areas Attribute Table*. Scores for top farmland-only criteria high-scoring parcels are found in *Table 4.7 Farmland-only Criteria Priority Areas Attribute Table*.

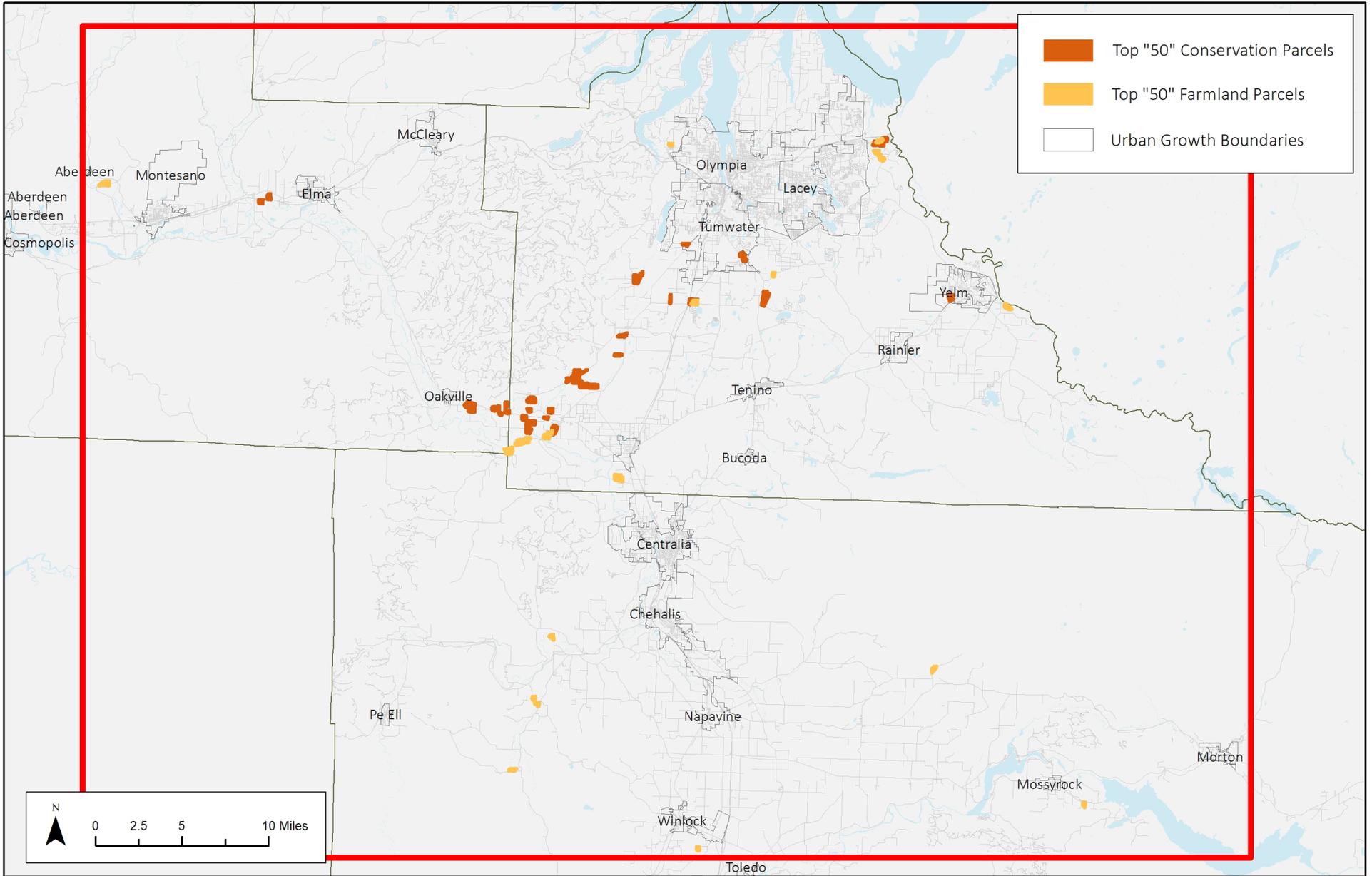


# Top 50 Highest-scoring Parcels for Conservation Criteria and Farmland-only Criteria



Map 4.10 Priority Area for Top 50 Highest-scoring Parcels for Conservation Criteria and Farmland-only Criteria

# Highest-Priority Areas



Map 4.11 Highest-Priority Areas

Table 4.6 Conservation Criteria Priority Areas Attribute Table

County	Parcel ID Number	Soil Type	Parcel Size (Acres)	Development Threat, Distance from UGA	Oregon Spotted Frog Habitat	Pocket Gopher Habitat
Thurston	067-13621120100	Prime Farmland	209	0.1 to 2.9 Miles	Yes	Yes
Thurston	067-71104400000	Prime Farmland	42	3 to 6.9 Miles	Yes	Yes
Thurston	067-09240001000	Prime Farmland	41	3 to 6.9 Miles	Yes	Yes
Thurston	067-09240001000	Prime Farmland	27	3 to 6.9 Miles	Yes	Yes
Thurston	067-09060004000	Prime Farmland	72	3 to 6.9 Miles	Yes	Yes
Thurston	067-12728430000	Prime Farmland	39	0.1 to 2.9 Miles	Yes	Yes
Thurston	067-12713220102	Prime Farmland	54	Within or Adjacent to UGA (0 to 0.1 Miles)	No	Yes
Thurston	067-13614210000	Prime Farmland	27	3 to 6.9 Miles	Yes	Yes
Grays Harbor	027-160432110020	Prime Farmland	96	0.1 to 2.9 Miles	Yes	Yes
Thurston	067-09060012000	Prime Farmland	11	3 to 6.9 Miles	Yes	Yes
Grays Harbor	027-160432130020	Prime Farmland	14	0.1 to 2.9 Miles	Yes	Yes
Grays Harbor	027-160432140010	Prime Farmland	27	0.1 to 2.9 Miles	Yes	Yes
Thurston	067-14501320000	Prime Farmland	45	3 to 6.9 Miles	Yes	Yes
Thurston	067-12728340000	Prime Farmland	12	0.1 to 2.9 Miles	Yes	Yes
Thurston	067-13631240100	Prime Farmland	13	3 to 6.9 Miles	Yes	Yes
Thurston	067-13631240200	Prime Farmland	25	3 to 6.9 Miles	Yes	Yes
Thurston	067-13724230900	Prime Farmland	15	0.1 to 2.9 Miles	Yes	Yes
Thurston	067-21725240100	Prime Farmland	45	Within or Adjacent to UGA (0 to 0.1 Miles)	No	Yes
Thurston	067-13602430400	Prime Farmland	38	3 to 6.9 Miles	Yes	Yes
Thurston	067-09240002000	Prime Farmland	34	3 to 6.9 Miles	Yes	Yes
Thurston	067-09770001000	Prime Farmland	134	0.1 to 2.9 Miles	Yes	Yes
Thurston	067-13631330000	Prime Farmland	16	3 to 6.9 Miles	Yes	Yes
Thurston	067-13724300000	Prime Farmland	105	0.1 to 2.9 Miles	Yes	Yes
Thurston	067-13506420000	Prime Farmland	32	3 to 6.9 Miles	Yes	Yes
Grays Harbor	027-160434240030	Prime Farmland	18	0.1 to 2.9 Miles	Yes	Yes
Grays Harbor	027-160434110020	Prime Farmland	26	0.1 to 2.9 Miles	Yes	Yes
Grays Harbor	027-160434230030	Prime Farmland	20	0.1 to 2.9 Miles	Yes	Yes
Thurston	067-12728310200	Prime Farmland	31	0.1 to 2.9 Miles	Yes	Yes
Thurston	067-12729320100	Prime Farmland	18	0.1 to 2.9 Miles	Yes	Yes
Grays Harbor	027-160434410010	Prime Farmland	22	0.1 to 2.9 Miles	Yes	Yes
Grays Harbor	027-160434310040	Prime Farmland	13	0.1 to 2.9 Miles	Yes	Yes
Thurston	067-47300500200	Prime Farmland	23	3 to 6.9 Miles	Yes	Yes
Grays Harbor	027-180632310020	Prime Farmland	39	0.1 to 2.9 Miles	No	No
Grays Harbor	027-180631440010	Prime Farmland	36	0.1 to 2.9 Miles	No	No
Grays Harbor	027-160432140020	Prime Farmland	21	0.1 to 2.9 Miles	Yes	Yes
Thurston	067-50302600101	Prime Farmland	20	3 to 6.9 Miles	Yes	Yes

Streak Horned Lark Habitat	Yellow-billed Cuckoo Habitat	Native Grasslands and Oak Woodlands	Rare Plants and High Quality Ecosystems	Salmon-bearing Streams	Connectivity to Public/Tribal Lands	Heritage Barn	Adjacent to Scenic Highway	Adjacent to Public Trail	Agricultural Productivity	Total Score
Yes	No	No	Yes	Yes	Adjacent	No	Not Adjacent	Not Adjacent	Food Crops	24
Yes	No	Yes	Yes	No	Not Adjacent	No	Not Adjacent	Not Adjacent	Hay/Silage	23
Yes	No	No	Yes	Yes	Not Adjacent	No	Not Adjacent	Not Adjacent	Food Crops	23
Yes	No	No	Yes	Yes	Not Adjacent	No	Not Adjacent	Not Adjacent	Food Crops	23
Yes	No	Yes	No	Yes	Adjacent	No	Not Adjacent	Not Adjacent	Food Crops	23
Yes	No	No	No	Yes	Not Adjacent	No	Not Adjacent	Not Adjacent	Market Crops	23
Yes	No	Yes	No	Yes	Not Adjacent	No	Not Adjacent	Not Adjacent	Market Crops	23
Yes	No	Yes	Yes	Yes	Not Adjacent	No	Not Adjacent	Not Adjacent	None	22
Yes	No	Yes	No	No	Not Adjacent	No	Not Adjacent	Not Adjacent	Food Crops	22
Yes	No	No	Yes	No	Not Adjacent	No	Not Adjacent	Not Adjacent	Food Crops	22
Yes	No	No	No	No	Adjacent	No	Not Adjacent	Not Adjacent	Food Crops	22
Yes	No	No	No	No	Adjacent	No	Not Adjacent	Not Adjacent	Food Crops	22
Yes	No	No	No	Yes	Adjacent	No	Not Adjacent	Not Adjacent	Food Crops	22
Yes	No	No	No	No	Not Adjacent	No	Not Adjacent	Not Adjacent	Market Crops	22
Yes	No	Yes	Yes	No	Not Adjacent	No	Not Adjacent	Not Adjacent	None	21
Yes	No	Yes	Yes	No	Not Adjacent	No	Not Adjacent	Not Adjacent	None	21
Yes	No	No	Yes	No	Adjacent	No	Not Adjacent	Not Adjacent	None	21
Yes	No	Yes	No	Yes	Not Adjacent	No	Not Adjacent	Adjacent	None	21
Yes	No	Yes	No	Yes	Not Adjacent	No	Not Adjacent	Not Adjacent	Other Crop	21
Yes	No	No	Yes	Yes	Not Adjacent	No	Not Adjacent	Not Adjacent	Other Crop	21
No	No	Yes	Yes	Yes	Not Adjacent	No	Not Adjacent	Not Adjacent	Other Crop	21
Yes	No	Yes	No	No	Adjacent	No	Not Adjacent	Not Adjacent	Other Crop	21
Yes	No	No	Yes	No	Adjacent	No	Not Adjacent	Not Adjacent	Other Crop	21
Yes	No	Yes	No	No	Not Adjacent	No	Not Adjacent	Not Adjacent	Hay/Silage	21
Yes	No	No	No	Yes	Not Adjacent	No	Not Adjacent	Not Adjacent	Hay/Silage	21
Yes	No	No	No	Yes	Not Adjacent	No	Not Adjacent	Not Adjacent	Hay/Silage	21
Yes	No	No	No	Yes	Not Adjacent	No	Not Adjacent	Not Adjacent	Hay/Silage	21
Yes	No	No	No	Yes	Not Adjacent	No	Not Adjacent	Not Adjacent	Hay/Silage	21
Yes	No	No	No	Yes	Not Adjacent	No	Not Adjacent	Not Adjacent	Hay/Silage	21
Yes	No	No	No	No	Adjacent	No	Not Adjacent	Not Adjacent	Hay/Silage	21
Yes	No	No	No	No	Adjacent	No	Not Adjacent	Not Adjacent	Hay/Silage	21
Yes	No	No	No	Yes	Adjacent	No	Not Adjacent	Not Adjacent	Hay/Silage	21
No	Yes	Yes	Yes	No	Not Adjacent	No	Adjacent	Not Adjacent	Hay/Silage	21
No	Yes	No	Yes	Yes	Adjacent	No	Adjacent	Not Adjacent	Hay/Silage	21
Yes	No	No	No	No	Not Adjacent	No	Not Adjacent	Not Adjacent	Food Crops	21
Yes	No	No	No	Yes	Not Adjacent	No	Not Adjacent	Not Adjacent	Food Crops	21
Yes	No	No	No	Yes	Not Adjacent	No	Not Adjacent	Not Adjacent	Food Crops	21

Table 4.6 (continued) Conservation Criteria Priority Areas Attribute Table

County	Parcel ID Number	Soil Type	Parcel Size (Acres)	Development Threat, Distance from UGA	Oregon Spotted Frog Habitat	Pocket Gopher Habitat
Thurston	067-50302600102	Prime Farmland	20	3 to 6.9 Miles	Yes	Yes
Thurston	067-50302600200	Prime Farmland	43	3 to 6.9 Miles	Yes	Yes
Thurston	067-09700032000	Prime Farmland	112	0.1 to 2.9 Miles	No	Yes
Thurston	067-14501210000	Prime Farmland	36	3 to 6.9 Miles	Yes	Yes
Thurston	067-14501220000	Prime Farmland	17	3 to 6.9 Miles	Yes	Yes
Thurston	067-14501220100	Prime Farmland	17	3 to 6.9 Miles	Yes	Yes
Thurston	067-14501230000	Prime Farmland	42	3 to 6.9 Miles	Yes	Yes
Thurston	067-14635410000	Prime Farmland	41	3 to 6.9 Miles	Yes	Yes
Thurston	067-13506310100	Prime Farmland	20	3 to 6.9 Miles	Yes	Yes
Thurston	067-12708410100	Statewide Importance/Prime if...	16	Within or Adjacent to UGA (0 to 0.1 Miles)	Yes	Yes
Thurston	067-12709320100	Statewide Importance/Prime if...	10	Within or Adjacent to UGA (0 to 0.1 Miles)	Yes	Yes
Thurston	067-12728420100	Prime Farmland	7	0.1 to 2.9 Miles	Yes	Yes

Streak Horned Lark Habitat	Yellow-billed Cuckoo Habitat	Native Grasslands and Oak Woodlands	Rare Plants and High Quality Ecosystems	Salmon-bearing Streams	Connectivity to Public/Tribal Lands	Heritage Barn	Adjacent to Scenic Highway	Adjacent to Public Trail	Agricultural Productivity	Total Score
Yes	No	No	No	Yes	Not Adjacent	No	Not Adjacent	Not Adjacent	Food Crops	21
Yes	No	No	Yes	Yes	Not Adjacent	No	Not Adjacent	Not Adjacent	Food Crops	21
Yes	No	No	No	No	Adjacent	No	Not Adjacent	Not Adjacent	Food Crops	21
Yes	No	No	No	No	Adjacent	No	Not Adjacent	Not Adjacent	Food Crops	21
Yes	No	No	No	No	Adjacent	No	Not Adjacent	Not Adjacent	Food Crops	21
Yes	No	No	No	No	Adjacent	No	Not Adjacent	Not Adjacent	Food Crops	21
Yes	No	No	No	No	Adjacent	No	Not Adjacent	Not Adjacent	Food Crops	21
Yes	No	No	No	No	Not Adjacent	No	Not Adjacent	Not Adjacent	Market Crops	21
Yes	No	No	No	No	Not Adjacent	No	Not Adjacent	Not Adjacent	Market Crops	21
Yes	No	No	No	No	Not Adjacent	No	Not Adjacent	Not Adjacent	Market Crops	21
Yes	No	No	No	Yes	Not Adjacent	No	Not Adjacent	Not Adjacent	Market Crops	21
No	No	Yes	No	Yes	Not Adjacent	No	Not Adjacent	Not Adjacent	Market Crops	21

Table 4.7 Farmland-only Criteria Priority Areas Attribute Table

County	Parcel ID Number	Soil Type	Parcel Size (Acres)	Agricultural Productivity	Heritage Barn	Total Farmland Criteria Score
Lewis	041-019091002000	Prime Farmland	19	Market Crops	Yes	15
Lewis	041-011988004004	Prime Farmland	21	Food Crops	Yes	14
Grays Harbor	027-180834120020	Prime Farmland	20	Market Crops	No	13
Grays Harbor	027-180834120010	Prime Farmland	20	Market Crops	No	13
Grays Harbor	027-180834210010	Prime Farmland	15	Market Crops	No	13
Grays Harbor	027-150410440010	Prime Farmland	22	Market Crops	No	13
Grays Harbor	027-180834210020	Prime Farmland	17	Market Crops	No	13
Lewis	041-019492002000	Prime Farmland	19	Market Crops	No	13
Lewis	041-016183004008	Prime Farmland	24	Market Crops	No	13
Lewis	041-018649002004	Prime Farmland	25	Market Crops	No	13
Lewis	041-012515000000	Prime Farmland	44	Market Crops	No	13
Mason	045-42117-12-00000	Prime Farmland	37	Market Crops	No	13
Mason	045-42117-21-00000	Prime Farmland	31	Market Crops	No	13
Thurston	067-14511110200	Prime Farmland	36	Market Crops	No	13
Thurston	067-14512220100	Prime Farmland	15	Market Crops	No	13
Thurston	067-14511330100	Prime Farmland	40	Market Crops	No	13
Thurston	067-12807440100	Prime Farmland	10	Market Crops	No	13
Thurston	067-12807440200	Prime Farmland	10	Market Crops	No	13
Thurston	067-13506330000	Prime Farmland	25	Market Crops	No	13
Thurston	067-13506340300	Prime Farmland	19	Market Crops	No	13
Thurston	067-09640015000	Prime Farmland	34	Market Crops	No	13
Thurston	067-13523240000	Prime Farmland	11	Market Crops	No	13
Thurston	067-13523120000	Prime Farmland	50	Market Crops	No	13
Thurston	067-13523210000	Prime Farmland	35	Market Crops	No	13
Thurston	067-11720220100	Prime Farmland	22	Market Crops	No	13
Thurston	067-09640019000	Prime Farmland	37	Market Crops	No	13
Thurston	067-14511110300	Prime Farmland	35	Market Crops	No	13
Thurston	067-09700040001	Prime Farmland	25	Market Crops	No	13

Table 4.7 (continued) Farmland-only Criteria Priority Areas Attribute Table

County	Parcel ID Number	Soil Type	Parcel Size (Acres)	Agricultural Productivity	Heritage Barn	Total Farmland Criteria Score
Thurston	067-13506310100	Prime Farmland	20	Market Crops	No	13
Thurston	067-22728420000	Prime Farmland	40	Market Crops	No	13
Thurston	067-12728340000	Prime Farmland	12	Market Crops	No	13
Thurston	067-12728430000	Prime Farmland	39	Market Crops	No	13
Lewis	041-032429002002	Prime Farmland	26	Hay/Silage	Yes	13
Lewis	041-029410001000	Prime Farmland	21	Hay/Silage	Yes	13
Mason	045-42034-12-00000	Prime Farmland	40	Hay/Silage	Yes	13



# Discussion

The results of the Priority Conservation Areas Study for South of the Sound Community Farm Land Trust demonstrate that Thurston County lands, outside the major urban centers of Olympia, Lacey, and Tumwater, clearly stand out in the region for their high conservation value. Prioritizing these areas could make important contributions to South Sound Region ecological systems, to farmland and open space conservation goals, and to local foods systems.

The high-priority areas stretch northeast to southwest across the county, from the east at Nisqually and Yelm, to areas south of Olympia and Tumwater. The locations near Black River and south of Capitol Forest are important for their critical habitat contributions, including for Oregon Spotted Frog, Streaked Horned Lark, and Mazama Pocket Gopher, shown previously in *Map 3.4 Critical Habitat*. In addition, the rural areas of Thurston County are characterized by extensive agricultural uses, again particularly in the southwest, near Grand Mound and Rochester, as demonstrated in *Map 3.18 Thurston County Agricultural Productivity by Crop Type*.

While strictly considering agricultural conservation criteria (i.e. agricultural soils, parcel size, agricultural productivity), it is Lewis County which stands out as the area with the greatest concentration of priority conservation lands, particularly in western Lewis County, near the communities of Adna, Boistfort, Toledo, and Salkum. In Grays Harbor County, the priority farmland conservation areas are found south of U.S. Route 12, between Elma and Montesano, and to the south near Oakville.

It should be no surprise that these priority areas follow Prime Farmland soils along the waterways of the Chehalis and Cowlitz Rivers. Satellite imaging shows the plentiful fields that follow the rivers in western Lewis County and southern Grays Harbor County. The agricultural productivity of these areas is confirmed by Washington State Department of Agriculture data, displayed in *Map 3.14 Agricultural Productivity*.

Within the region, Mason County demonstrates the lowest conservation resource value for the purposes of this Study. Importantly, total agricultural productivity in this area is low, and Prime Farmland soils are less plentiful than in other locations. The County had the fewest instances of high-scoring parcels in the full conservation criteria analysis, as well as in the agricultural criteria analysis.

Overall, the Study should confirm much of the local and institutional knowledge relative to agriculture and environmental resources in the South Sound Region, while also providing useful statistical and visual references based in quality data, research, and extensive analysis.

It is important to note that there are important pieces of information relevant to potential conservation acquisitions that are not included in this analysis. One of the property attributes for which data was unavailable is water rights. Other important property features will be land cost, and whether affordable housing for farmers and laborers is provided on the property. The extent to which agriculture is practiced on the land, and the history of agricultural practices and land and soil stewardship are

also important. In consideration of the large scope of the project (nearly 300,000 parcels!), it is expected that the Study be used in conjunction with a fine-grained analysis of South Sound farmland properties.

The approach at weighting conservation criteria to the breadth included in agricultural, environmental, and cultural values and priorities could be further refined by SSCFLT. This document may be used to prompt discussions as to the relative importance of certain conservation characteristics, and on the organization's expectations of farmland acquisitions. Additionally, rather than to guide acquisition decisions on the level of individual parcel, the Study may best be used to help inform outreach strategies with farmers and other interested parties, including funders.

The Priority Conservation Areas Study is meant to provide a foundation for better understanding the potential for farmland conservation in the South Sound Region, and it is hoped that the document will inspire numerous deliberations and conversations about South of the Sound Community Farm Land Trust's future.

# Data Sources

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